Building Regional Intermediary Capacity Towards Equity, Access, and Excellence in Tennessee's Grades 7-14/16 College and Career Pathways

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Doctor of Education Leadership (Ed.L.D.)
Capstone

Submitted by

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To my beautiful wife Tiffany,
For relocating to Meh'fid, holding down the fort, and expanding our family,
all while encouraging me to persist in this journey.
I couldn't have done it without your patient love.
Thank you. God is good.

Acknowledgements

My colleagues at JFF have blown me away with their optimism and passion for expanding opportunities for youth and underserved communities across the country. They have taught me so much about creating high-quality academic and career pathways for young people while keeping equity front and center. Their refusal to work in siloes has modeled the way educational problem-solving and solution-generation should take place. Amy, Bob, and Nancy have been incredible mentors and have invested so much time and energy in building Pathways to Prosperity to lead a critically necessary movement in this country. Tobie, I could not have asked for a better office mate. Keep being you. Charlotte, Kyle, team; thank you for investing in me and my work.

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Thank you to my committee members, Nancy Hoffman, Ron Ferguson, and Marty West. Your insight and commitment to improving my thought and work pushed me to approach from all angles to find the best possible solutions. Marty, thanks for serving as much more than an advisor to me these past three years. Nancy, you amaze me with your energy and brilliance. Ron, thank you for sharing such sound wisdom with me throughout this process.

I am so grateful to my incredible wife Tiffany, and her willingness to pick up our then six-month old and everything else we owned to go on this three-year adventure. She is my biggest supporter and challenges me daily to be better. Speaking of that six-month old, Marilee has gone from sleeping through two Harvard classes per week in a car seat to running the world as a threenager. Her enthusiasm and silliness have kept me going through the occasional doldrums of graduate school. Finally, we have added a second little one along the way, and though I am convinced Rhett will not remember Daddy's third year at Harvard, I am even more certain he has inspired me to finish strong. Our extended family and friends have constantly expressed love and support from all over the country, and I am grateful for all of their encouragement along the way.

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Table of Contents

Abstract

Career pathways help direct students' futures direction and provide relevant, engaging learning experiences that are designed to lead them to and through a postsecondary degree or credential and ultimately on to successful occupations with family-sustaining wages, upward career trajectories, and economic mobility. Although one essential lever to successful career pathways is strong and supportive state level policy and leadership, career pathways development and implementation must ultimately take place within regional ecosystems that encompass economic labor sheds, including postsecondary institutions and employers. Cross-sector regional partnerships among educational institutions (secondary and postsecondary), employers, and workforce development are critical to developing the programming, curriculum, and career-readiness opportunities students need to step boldly into their futures. The success of such partnerships hinges on the capacity of cross-sector stakeholder collaborations, or regional intermediaries, to effectively convene, organize, and execute the work.

Though Pathways Tennessee has been working across the state to expand career pathways in Tennessee since 2012, as of the end of the 2016 school year, fewer than one percent of students statewide had completed high-quality school-to-career pathways. Likewise, fewer than seven percent of students were graduating with early postsecondary credits, a strong predictor of postsecondary degree attainment. As state-level agencies partner to lead and support the work of Pathways Tennessee, regional intermediary capacity must expand to execute the work. My strategic project focused on building the capacity of regional leads, intermediaries, and stakeholders to effectively design, pilot, implement, and continuously improve career pathways.

Two themes resonated throughout the project, equity and sustained commitment. Absent a steady focus on these two aspects of career pathways design and execution, programming inevitably fails to serve all students or reach its full potential. In Tennessee, data analysis revealed substantial racial gaps in access and completion of high-quality pathways programs. Additionally, as Pathways Tennessee and its regional intermediary partners experienced shifts in personnel, policies, and politics, it became clear that the necessary work to improve pathways statewide would be negatively impacted without sustained commitment from all pathways stakeholders.

Ultimately, I was only able to complete a portion of the capacity-building work I had hoped to achieve through my strategic project. This was due, in part, to the responsible and strategic decision for Pathways Tennessee to temporarily pull back from directly supporting regions to instead formulate a coherent long-term vision and plan for improving and expanding career pathways statewide.

Introduction

Residency Context

I served as a Doctoral Resident with the Pathways to Prosperity (PtoP) Network, focusing my strategic project on developing regional intermediary capacity to implement high-quality career pathways with Pathways Tennessee, a network partner. PtoP is a program of Jobs for the Future (JFF), a private non-profit organization headquartered in downtown Boston with offices in Oakland, CA and Washington, D.C. Launched in 1983, JFF expands access to educational and economic opportunity, leading to a stronger U.S. workforce, by performing three primary capacities:

1) Ensuring high school students and opportunity (out of work/school) youth are prepared for postsecondary education and successful careers

2) Assisting underprepared students to earn postsecondary credentials with labor market value

3) Helping low-skilled workers advance and employers to thrive (JFF, 2015)

JFF operates within two large silos, the Building Economic Opportunity Group (BEOG), focused on serving unemployed and underemployed adults, and Building Educational Pathways for Youth (BEPY), focused on young people in grades 9-14 (A. Loyd, personal communication, March 2, 2016).

JFF often serves as a boundary-spanner, convening a number of diverse groups and individuals to collectively address specific issues. JFF is well-positioned to perform this role because of its vast and organized network of partners across all sectors, and it operates from a space that makes it neither educator nor industry, with diverse funding streams, from public, private, and philanthropic sources. Despite not fitting neatly into any sector, JFF understands the complexities of each of these sectors and has become

skilled at speaking their respective languages. Just as foreign nationals often require translators to communicate across geographic boundaries, one challenge to convening disparate groups is bridging the inherent communication gap caused by industry and company cultures and sectoral jargon. Recognizing the need to bridge those gaps, JFF positions itself as a competent and reliable intermediary within the social sector.

Though the residency did not officially begin until July 1, 2016, after taking a seminar course with my two residency mentors in the spring semester of that year, I joined JFF as a temporary employee in the months leading up to my official start. I agreed to do this for a number of reasons, most notably to better associate myself with JFF's organizational culture and performance expectations, and to familiarize myself with the company's various work streams to be better prepared for residency entry. My goals for the residency were as follows: 1) Develop a deep understanding of career pathways work on a national, statewide, and regional scale 2) Gain competencies to effectively convene key cross-sector public and private stakeholders in the work 3) Leverage my work at JFF in the Southeast (predominantly Alabama, Louisiana, Tennessee and Georgia) to create an opportunity for entry into executive leadership of a state education agency or statewide career pathways intermediary. Because of the unique nature of the residency experience, coupled with the critical work that JFF and I hoped to accomplish, it was essential that I accurately assessed and navigated JFF's intermediary role to jointly achieve our goals over the year.

Upon joining JFF, I quickly learned that regardless of job title or primary project/focus area, collaboration is valued and individuals and teams work across initiatives to support and improve final outcomes and deliverables. Staff described the

organization as highly collaborative such that the 130-plus employees with a variety of roles and foci often find themselves working on overlapping initiatives and on strategy teams across initiatives, with colleagues whom they typically would not interact (JFF, 2016). The level of collaboration within the organization modeled what I hoped to encourage in the outward-facing strategic project I would lead with regional partners.

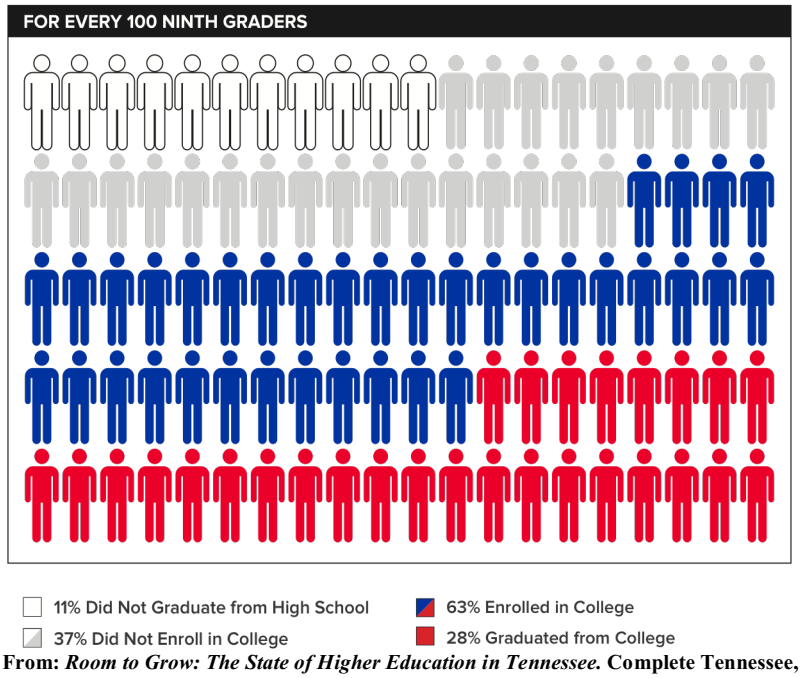
The PtoP program I worked on was created in 2011 by Bob Schwartz and Nancy Hoffman. PtoP further took shape and expanded as a residency project for a member of Ed.L.D.'s Cohort 1, Amy Loyd. The PtoP Network is a coalition of 12 states and a variety of regions and cities across the U.S. working to create school-to-career postsecondary pathways for all students, especially focused on traditionally under-represented communities. Though JFF has vast institutional knowledge and research-driven practices they bring to the table in their intermediary role, they depend heavily on their initiative partners, be they private sector employers, educational institutions, or public agencies, to execute the work on the ground. Additionally, one component of the Pathways theory of action reasons that this ground level work must be done within regional economic labor sheds. The basis for this is primarily pragmatic. Just as critical as it is to understand the demographic and educational makeup of the workforce, employers must also recognize that the people they depend on to work for them on a daily basis can only do so within certain geographic bounds, determined by a number of conditions, such as public and private transportation options, required time on the job, and wages. The Center for Community Economic Development (2204) defines a labor shed as the geographic region from which an employment center draws its workforce, regardless of geographic or political boundaries. Our focus is fixed to regional labor

sheds, because they represent the maximum distance workers are willing to travel to work on a daily basis (CCED, 2004), thereby defining the spatial bounds within which engaged employers are traditionally willing to invest in developing their future workforce.

Site Context

The ground-level partner I worked alongside for my strategic project was Pathways Tennessee (Pathways TN), a national leader in career pathways work. Pathways TN is housed under the Tennessee Department of Education (TNDOE), led by Commissioner Candice McQueen. The Pathways TN initiative, launched in 2012 as a founding member of the PtoP Network, provides a unifying vision for career-focused education throughout the state of Tennessee. Pathways TN functions as an integral piece of Governor Bill Haslam's statewide *Drive to 55* initiative, with the goal that 55 percent of Tennessee citizens will have a postsecondary degree or credential by 2025 (currently, approximately 1/3 of Tennesseans do; See Figure 1 below).

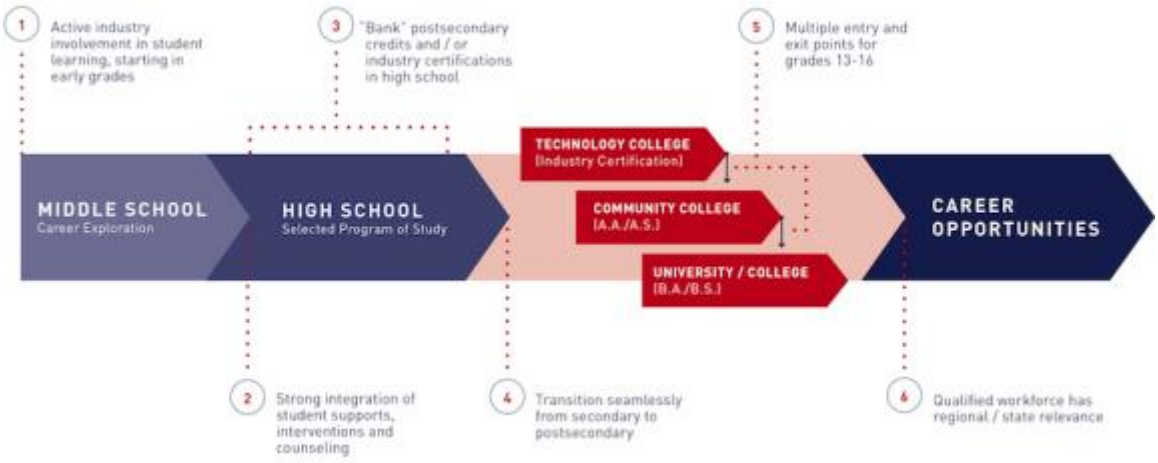
Figure 1: Tennessee High Schooler Educational Attainment



From: ***Room to Grow: The State of Higher Education in Tennessee.*** **Complete Tennessee, 2016**

Pathways TN's mission is to provide all students rigorous college and career pathways, related to Tennessee's regional economic and labor market needs and trends. To achieve this goal, Pathways TN works to implement the following framework components:

Figure 2: Pathways TN Framework



From the Office of Pathways Tennessee, Tennessee Department of Education (2016)

Though the TNDOE leads the Pathways TN work, it regularly convenes a Pathways State Planning Team comprising leadership from the Department of Labor and Workforce Development, the Tennessee Higher Education Commission, the Tennessee Business Roundtable, the Governor's Office, the Tennessee State Board of Education, the Department of Economic and Community Development, the Tennessee Council on Career and Technical Education, Tennessee Independent Colleges and Universities Association – Tennessee Board of Regents, and the Tennessee State Collaborative on Reforming Education. With each individual organization constantly in a state of flux, as policies shift, politics shift, and with staff and leadership transitions, it is critical that the commitment from each organization is sustained long term in order for this movement to be a success. Each partner integrates the Pathways TN work into their organizational goals and communications, including, but not limited to: advocacy, funding, convenings,

data-sharing, and additional technical assistance. The broad-based support and leadership from multiple sectors and statewide agencies give Pathways TN the political mandate necessary to drive towards establishing the sustainable regional collaborations that must ultimately implement career pathways programming.

Strategic Project Context

Though TNDOE and Pathways TN are responsible for shaping state policy and creating a supportive statewide environment, the creation and implementation of career pathways must be achieved within regional economic centers supported by local industry and employers, school districts and educators, and a number of other local institutions and stakeholders. Pathways TN structures its work across nine designated economic development regions, each composed of between four and 16 counties. Some regions are comprised of multiple school districts within each county, since many municipal areas have their own smaller districts along with each county school district. Likewise, each region also has several postsecondary institutions to leverage, including at least one Tennessee community college (TCC) campus and one Tennessee College of Applied Technology (TCAT) campus, as well as other public and private institutions, including four-year universities. Additionally, each region has unique characteristics and assets that allow certain industries to thrive within its bounds, creating a myriad of employers with a variety of workforce needs. Representatives from these institutions often partner to support and guide regional intermediaries, the body designated to organize, energize, direct the pathways work of each region.

My strategic project focused on building the capacity of regional intermediaries to accomplish their plans and goals, especially in regards to creating high-quality grades

seven through 14 or 16 college and career pathways with equity, access, and excellence in mind. My early work focused on gathering information from each region, predominantly through means of focus groups or asset mappings. I then conducted a statewide needs assessment that includes a data analysis component to provide an accurate portrayal of where the state is in regard to its goal to provide all students with high-quality college and career pathways. Finally, I have worked with Pathways TN staff to develop and create diagnostic and capacity-building tools including surveys, rubrics, onboarding processes, curriculum, and other development related materials and activities to ensure the regional intermediaries are well-equipped to create action plans to implement high-quality career pathways.

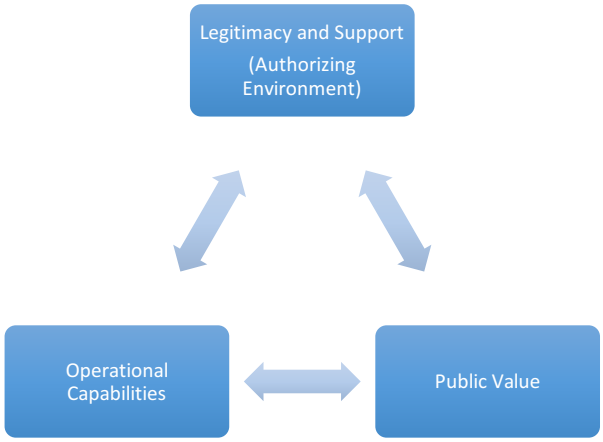
Two resonating themes throughout the project, equity and sustained commitment, emerged as focal points to advance career pathways in Tennessee. Absent a steady focus on these two aspects of career pathways design and execution, programming inevitably fails to serve all students or to reach its full potential. Though pathways stakeholders frequently use the language of "all students," one of the lessons to emerge from my work with them is how they must specifically shift their thinking and focus to the many demographic subgroups that must be individually considered to truly reach all students. Data analysis revealed substantial racial gaps in access and completion of high-quality pathways programs in Tennessee, gaps experienced by states nationwide. Additionally, as Pathways Tennessee and its regional intermediary partners experienced shifts in personnel, policies, and politics, it became clear that the necessary work to improve pathways statewide would be negatively impacted without formally structured and sustained, long-term commitment from all pathways stakeholders and partners.

Review of Knowledge for Action (RKA)

JFF, the PtoP team, and Pathways TN primarily play a convening and supportive intermediary role in executing career pathways work. As I will argue, the partners they bring to the table and the work that is collectively accomplished through these partnerships are essential to achieving ground-level results with young people. This RKA explores theory behind the content of the work, the composition of the stakeholders that are charged with executing it, and the collaboration and learning they must do to be effective. I will address the complexity of the pathways work drawing on research and best-practice from the fields of career pathways, regional cross-sector and inter-agency collaborations, organizational culture and learning, and educational reform initiative implementation specifically centered around change theory. I first explain how I arrived at a research question to focus my project, and after providing some context towards exploring that research question, I will articulate the Theory of Action I developed to help guide my work.

Mark Moore's Strategic Triangle framework (Figure 2 below) for creating public value focuses attention on three critical components necessary to implement and execute high-quality career pathways programming.

Figure 3: Strategic Triangle Framework



Adapted from: *Creating Public Value*. Mark Moore, 1995

Moore defines public value as a service provided that results in more social utility (or good) than the inputs and resources required to produce it (Moore, 2004). Numerous studies, reports, and statistics regarding both education and the economy indicate the need for, and therefore public value produced by, building out high-quality career pathways. Nearly two-thirds of all new jobs created in the U.S. require education beyond a high school diploma, yet the current rate of postsecondary credentialing by age 27 hovers below 50%, leading to the label of "the forgotten half" (Symonds, Schwartz, & Ferguson, 2011). Most stakeholders recognize the need for something different (better) targeting the forgotten half and with high-quality career pathways emerging as a viable solution, the focus then shifts to the other two elements of the Strategic Triangle, Operational Capabilities and Legitimacy and Support. Operational Capabilities refer simply to the capacity of those charged with implementing or producing the service to successfully execute and deliver the desired outcome. Can they accomplish what they set out to accomplish? Although not the sole focus of the RKA, a majority of my residency work dwells in this corner of the triangle, helping to build capacity among organizations to deliver high-quality career pathways.

The Legitimacy and Support component includes the many necessary inputs, resources, and political backing (or authorization) needed to launch, sustain, and successfully complete the work. This corner of the triangle is extremely complex in the work of career pathways, as they include a number of sources of legitimacy and support across the private, non-profit, and public sectors, and even multiple agencies, sub-sectors, and industries within each of these. The success of career pathways initiatives hinges on these enabling environments in which all of the organizations operate and the collective

capacity of these partners to not only collaborate efficiently, but also to organize for both learning and results (Rama, 2009). As one pair of researchers put it, "Because most business strategies include more than one alliance, success often depends on how the whole collection of alliances fit together" (Parise, 2003, p. 26). Based on this complexity of fit, I arrived at the research question that brought my strategic project into focus.

Research Question

Once regional cross-sector partnerships are formed and visions are set, what are evidence-based strategies to build the capacity of these intermediaries towards successful career pathways implementation?

Content

*The Career Pathways Approach**

Before tackling that question, I first considered available research about the content of career pathways and the structures that compose cross-sector pathways intermediaries. A seminal report published by the Harvard Graduate School of Education shed light on both the problem and a handful of potential solutions, and subsequently provided the national demand and namesake to launch the PtoP Network. The Pathways to Prosperity Report (Symonds et al., 2011) propelled career pathways and career-focused education to the forefront of concern for many educators, employers, and policymakers. It not only illuminated the growing challenge caused by the looming "skills gap" and the dire need for all young adults to attain some form of postsecondary education, credential, or certificate, but it also provided a framework for much of the policy change and work that needed to take place to meet these challenges.

*For the purposes of this project, the terms "career pathways," "career-focused education," "college and career pathways," and "education-to-career pathways" are used interchangeably.

To combat the inadequacy and inequity of our current secondary education and even higher education systems, the paper proposed that we broaden the look and length of pathways to better align with both student interests and the new economy in this 21st century: "Continuing on our current course, by placing almost all our bets on classroom-based pedagogy, is likely to produce little more than the marginal gains we've seen over the past two decades (Symonds et al., 2011, p. 30)." To reverse the trend, the report advocated for three essential elements to change the narrative: 1) Expand school reform efforts to enable multiple educational pathways to adulthood for our youth; 2) Expand the role of employers in supporting these pathways; and 3) Create a new "social compact" between society and youth to capture each stakeholder's role and responsibility in these new pathways (Symonds et al., 2011).

As the report became more widely known, the Pathways to Prosperity Network emerged in response to states and regions seeking guidance and support for implementing new pathways. The PtoP Network created a framework to define these new pathways, with four key levers that help support and advance high-quality career pathways. To further understand this model, refer to the figure below (JFF, 2014, p. 7).

Figure 4: Pathways to Prosperity Framework

Source: Pathways to Prosperity Network.

The Pathways movement was further bolstered in the Spring of 2013, with over 400 participants from across the country joining for the first "Creating Pathways to Prosperity" Conference. Experts in the field, philanthropists, policymakers, business leaders, and educators met for two days to discuss the critical need for expanding pathways systems for the children and communities they serve. From this conference, A *Blueprint for Action* (Ferguson and Lamback, 2014) emerged with a number of recommendations and imperatives for expanding and achieving the following pathways vision.

> The Pathways vision is that young Americans from all racial, ethnic, and socioeconomic backgrounds, and from all parts of the nation will complete secondary school, receive postsecondary preparation and certification for entry into viable careers, and then transition successfully into the adult world of work. (Ferguson, 2014, p. iv)

The first imperative is to **cultivate commitment** among positional authorities in business, education, and the civic sector to create a sense of urgency for the work and embrace the significant challenge of implementing pathways systems. The necessity of this imperative to incentivize sustaining the commitment over the long-term cannot be overemphasized. Secondly, we must **build capacity** for the local work that takes place locally in schools, training centers, and among employers on the job sites. This imperative again prompts an intermediary to lead and organize the collaborative, cross-sector work that is required. This also became my strategic project's cornerstone as I focused my attention on building the capacity of the nine Pathways TN regions. A third imperative to **deliver opportunity** focuses attention around both quality and equity,

ensuring all students have access to excellent programming regardless of their demographic background. To ensure all students have access, stakeholders must specifically adapt policies, procedures, and programming to reach the demographic subgroups that are often found at the margins. Finally, we must **measure progress** to ensure all stakeholders are doing their part, successfully executing on their work streams, and reflecting on both successes and failures to inform decision-making moving forward (Ferguson, 2014, p. 3).

With the underpinnings of strong pathways in place, it is critical to clearly articulate what is meant by high-quality grades 9-14 academic and career pathways. I will begin by explaining what each essential aspect of these pathways is *not*, before moving on to describe the ideal. Academic and career pathways are not separate, distinct programs, with university-bound students leaning more academic and non-college bound students focusing more on careers. Likewise, career pathways are not solely focused on vocational education tracks, preparing low performing high school students for jobs in skilled, blue-collar work. They are also not a random assortment of hands-on classes aimed to get young people "re-engaged" in high school. Although work-based learning is a critical component, co-op and other unrelated work opportunities do not fit the bill.

As opposed to what high-quality career pathways are not, let us now examine what the PtoP team considers to be the ideal. High-quality career pathways integrate core academics with career-focused coursework to link all learning in a cohesive, engaging package preparing young people for specific fields along with general employability skills. Career pathways expose all students to the "world of work," providing a richer concept of what their education is ultimately preparing them for (Cahill, 2014, p. 15).

Model pathways also reflect the highest growth industries of each community, offering students a broad swath of careers in jobs that are high-demand and high-wage with an upward career trajectory. Career pathways are strategically structured around vertically aligned Programs of Study that build in rigor and responsibility as students advance through their work (Cahill, 2014, p. 10). Additionally, high-quality pathways include structured, supervised, and paid work-based learning opportunities, such as internships or apprenticeships, that directly link with the student's interests, classroom learning, and chosen program of study. Similar to the student's coursework, work-based learning must also be carefully crafted along a continuum of experiences, to transition students from career awareness and exposure to career exploration to career immersion (DESE, 2013). This does not happen haphazardly, but instead through a thoughtfully designed career guidance and advising program, ideally beginning no later than the middle grades (Cahill, 2014, p. 12).

As the focus on 9-14 grade levels indicates, postsecondary is an essential piece of the pathway, especially to enable high schoolers early access to college level work. However, the goal of this coursework is not to help students knock out prerequisite college coursework such as English 101 or Calculus to begin their four year journey ahead. Rather, these college-level courses, similar to their high school counterparts, are part of a vertically aligned program of study that teaches technical knowledge and skills culminating in an industry-valued credential, certificate, or degree (Cahill, 2014). This early (high school) and aligned postsecondary exposure, whether accessed through dual/concurrent enrollment, dual credit, attending early college high schools, or any other college level equivalency program designed for high schoolers to attain postsecondary

credits, is a primary component of high-quality pathways. In fact, multiple studies have shown tremendous benefits for both enrollment and persistence to postsecondary degrees and credentials by way of early access, especially for low-income minorities (Struhl, 2012). These studies suggest that student accumulation of at least 12 postsecondary credits while still in high school is a strong predictor that they will persist to completion of a postsecondary credential, be it associate's, bachelor's, or both (Adelman, 2009). Of course, credit accumulation alone is not necessarily the cause of the differences in persistence outcomes. However, the implications of earning these credits, such as achieving success in a college environment and being nearly a semester ahead of schedule to graduate certainly provide students the momentum needed to reach their goals.

Career pathways implementation is exceedingly complex and complicated, but the content of this pathways work is not the primary source of the complexity. Transitioning from the content of pathways to the composition of the stakeholder organizations and partnerships charged with executing the work, the source of the complexity comes into view.

Composition

Organizing Career Pathways Stakeholders

One inherent challenge in career pathways work is found in the diverse organizational structures of the partners "at the table." For simplicity's sake, at times in this Capstone I will refer to these collaborations of organizations across fields, sectors (public and private), and industries as cross-sector partnerships. I will use this term because it most aptly describes the combination of separate entities that career pathways

initiatives most often convene, with the guiding rules and characteristics of these cross-sector partnerships best described by Oppen et. al. (2005) in their work on public-private partnerships as: 1) Independent organizations with their own set of objectives voluntarily enter into the arrangement while agreeing to exchange some set of resources to participate 2) Agreements, both formal (contractual) and informal are made which govern the exchange of resources towards defined purposes 3) Each organizations' actions within the partnership are governed by the organization's respective sectorial rules or norms as well as the partnership agreement itself. To provide clarity, one example would be a state education agency, such as the Tennessee Department of Education, 1) freely entering into the PtoP Network, 2) bringing public funds and resources to the table 3) while operating under stringent policies, regulations, and guidelines set forth by the state legislature and most often the state board of education. Conversely, a private sector employer that 1) freely enters into the partnership, may 2) simply provide workplace learning opportunities (internships, apprenticeships, etc.) 3) while operating at the discretion of a sole proprietor or a board of directors. Although the specific arrangements of the partnership can be as varied as the players involved, terms such as collective, collaboration, and partnership (and associated action verbs) will be used interchangeably throughout the paper unless otherwise noted (Thibault, 2009). I will address the critical details of the agreements and partner expectations later in this RKA, with a brief analysis around specific group arrangements. In more specific contexts, such as that of Pathways Tennessee's non-staff leadership, I will use the term, State Planning Team, as it accurately describes both the function and formal title of this group.

Leading into my research question, I encountered a sub-question that, though not the focus of this RKA, is relevant to the career pathways work: What are the most productive strategies applied to form highly functional cross-sector partnerships to maximize outcomes in college and career pathways? Though I will only address it in part, I encourage much more extensive research in order to help the field think more critically about having the right partners at the table from the start.

To shed some light on this question, I will start by briefly presenting general theory around groupings and partnerships then I will move to consider the Collective Impact (CI) approaches to collaborative work, as it is widely considered the standard model for collaborative work across multiple cross-sector organizations within a community. I will also address the specific starting point approach for most of PtoP's work with regions, asset mapping, in Phase I of the Project Description section.

Cross-Sector Partnerships

There are several ways to approach defining the types of collaborations or partnerships needed to build out career pathways and workplace learning opportunities for young people. Terms such as alliance, collaboration, joint venture, and cooperation are often used to describe multi-group partnerships, but regardless of what the new collective calls itself, the underpinnings of the relationship and how the organizations operate in conjunction ultimately define its effectiveness. The Stanford Social Impact Review (Kramer, 2011), composed of academia's foremost experts on the subject, suggests five common arrangements for social sector partnerships and defines them by their composition and undergirding principles. From these, it is clear that Collective Impact Initiatives, which I will evaluate in more depth in the next section, are preferred

over loosely assembled partnerships. Collective Impact Initiatives are those whereby cross-sector organizations enter into long-term commitments towards a common action plan to solve a specific, but often complex social issue. These arrangements are often backed by structural supports, mutual accountability, and agreed upon outcome measurements. Unfortunately, the resources and commitment levels across groups are not always available to create a collective impact model, though many of the practices and strategies found in them may be adaptable to other contexts and partnership forms, of which most career pathways initiatives undoubtedly fall.

Collective Impact Model

The Stanford Social Impact Review (Kramer, 2011) highlights a few instances in which organizations have rallied together to solve complex, uncertain challenges, a collaborative process that leads to CI. In each case, individual organizations, often driven by their own agendas, at least temporarily held their own isolated interventions loosely while shifting focus and resources to attend to the group's shared agenda. John Kania and his colleagues from FSG, who have led the way in defining and cultivating much of this work nationally, list this *Common Agenda* as the first of five conditions for CI (Kania, Hanleybrown, & Juster, 2014). Typically, this common agenda is formed through a series of meetings amongst decision-makers for the engaged organizations, allowing time to create a shared vision, which involves developing a common understanding of the issue and a joint approach to collaboratively solving it. *Shared Measurement* is the second component to establishing a CI approach. This involves deciding which metrics the CI collaborative will be looking at and how they will measure and report progress, success, or even failure across these metrics. The plan of action

entails engaging a diverse set of partners in *Mutually Reinforcing Activities* to ensure each role and responsibility for carrying out the action plan is aligned and supports one another's differentiated work. *Continuous Communication* is the fourth condition of CI work, one that requires dedicated and structured meeting time to help ensure open lines of communication, widespread information, and collective trust. Finally, CI must have *Backbone Support* to drive the work forward and ensure each partner is following through on their piece of the action plan. The backbone organization must be an independent, dedicated team to help organize the work, convene the partners, and orchestrate the plan as it moves forward. Though hidden at the end of the list, the critical role of the backbone organization cannot be stressed enough, which aligns closely with JFF's theory of action and typical approach to the work.

Unfortunately, collaborative groups do not simply attain Collective Impact by implementing the five conditions from above. The Collective Impact Forum (2014), led by FSG and the Aspen Institute: Forum for Community Solutions, further encouraged eight additional principles of practice that should likewise be included in an effective CI strategy. Three of the eight principles, *Equity at the Center, Community Member Inclusion, and Customize for Local Context* most closely align with JFF's model. In theory, once the conditions and principles of practice are in place, CI can go from an idyllic concept to a high-functioning structure through which cross-sector partnerships can thrive. However, the process of aligning all of these building blocks proves far more arduous than many groups can realistically sustain.

JFF has long operated with the mindset of breaking down walls that keep organizations operating in siloes in order to structure collective work for social good.

Although FSG's CI descriptions are rigorous and fairly exact, many of the components can be found in similar JFF-led partnerships whereby meeting the entire CI definition may be either difficult or inefficient to achieve. Selective CI strategies can still be helpful in achieving goals through collective work among cross-sector partners, even if all of the above components and principles are not met. The figure below from the White House Council for Community Solutions summarizes most of what is necessary for creating effective partnerships.

Figure 5: Community Collaboratives Essentials

From: *Community Collaboratives Whitepaper.* White House Council for Community Solutions, 2014

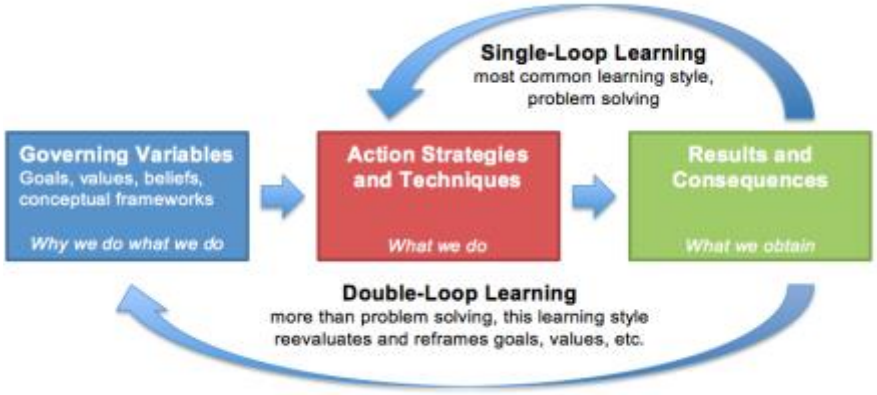
Collaboration and Learning

Organizational Culture and Learning

Returning to my research question, I sought to unearth evidence-based strategies to build the capacity of cross-sector regional intermediaries towards successful career pathways implementation. Organizational learning theory emerged as a valuable tool when considering the process of capacity building among groups. The late Chris Argyris (1977), Harvard Business School's organizational learning guru, defined organizational learning simply as "A process of detecting and correcting errors." Building on the earlier

references to Moore's Strategic Triangle and specifically to the Organizational Capabilities component, the organizations composing the pathways cross-sector partnerships must both individually and collectively learn and adapt to have any hope of successfully achieving their goals. Argyris (1999) went on to describe the process of this learning as having two possible paths, single-loop and double-loop learning. The graphic below was created based on Argyris's writings and displays the components of the two learning processes.

Figure 6: Double Loop Learning



Retrieved from: http://www.afs.org/blog/icl/?p=2653 (Romero-Pereda, 2012)

Single-loop learning takes place as mistakes are made and recognized, leading to counter-actions and altered strategies for how to go about the work differently and therefore get different, more preferred results. This equates to simple problem-solving, where we fix the flaws in the system and try again. Unfortunately, however, Argyris describes how this strategy can be cycled through several times, each leading to a different strategy or action with each coming up short of the desired result. This stems not from a failure to adequately plan the action, but instead from a failure to accurately

consider the "Governing Variables," such as the over-arching goals, mindsets, and frameworks.

Double-loop learning comes into play only when actors look beyond the specific actions they unsuccessfully made back to these Governing Variables that frame the entire situation. Argyris's research shows that few organizations effectively participate in double-loop learning because of both an overreliance on single-loop learning and a number of inhibiting factors resulting from a set of governing variables referred to as "theories of actions." Theories of action contain sets of propositions we either knowingly or unknowingly believe that tend to determine our actions. Guided by a set of assumptions we often have little awareness of, which Argyris refers to as Model I Assumptions (See figure below), we are set down a path that stresses immediate resolution via action and hinders the ability and capacity to self-correct in the form of double-loop learning. Theories of action often directly contradict stated or espoused values, creating a grave disconnect in and across individuals and organizations. This aligns well with Ron Heifetz's (1994) definition of adaptive challenges, those problems that require learning to successfully navigate the gap between people's shared values held and the realities of their situations. In the case of each internal contradiction, organizational learning is required if the problem is to be addressed. Too often, however, technical solutions, the equivalent to single-looped learning, are instead applied.

Figure 7: Double Loop Learning Theories of Action

Theories of action				
Governing variables for action	Action strategies for actor	Consequences on actor and his associates	Consequences on learning	Effectiveness
I	II	III	IV	V
Model I				
1 Achieve the purposes as I perceive them.	1 Design and manage environment so that actor is in control over factors relevant to me.	1 Actor seen as defensive.	1 Self-sealing.	
2 Maximize winning and minimize losing.	2 Own and control task.	2 Defensive interpersonal and group relationships.	2 Single loop learning.	Decreased.
3 Minimize eliciting negative feelings.	3 Unilaterally protect self.	3 Defensive norms.	3 Little testing of theories publicly.	
4 Be rational and minimize emotionality.	4 Unilaterally protect others from being hurt.	4 Low freedom of choice, internal commitment, and risk taking.		
Model II				
1 Valid information.	1 Design situations or encounters where participants can be origins and experience high personal causation.	1 Actor seen as minimally defensive.	1 Testable processes.	
2 Free and informed choice.	2 Task is controlled jointly.	2 Minimally defensive interpersonal relations and group dynamics.	2 Double loop learning.	Increased.
3 Internal commitment to the choice and constant monitoring of the implementation.	3 Protection of self is a joint enterprise and oriented toward growth.	3 Learning-oriented norms.	3 Frequent testing of theories publicly.	
	4 Bilateral protection of others.	4 High freedom of choice, internal commitment, and risk taking.		

Note: *Exhibit I* taken from Chris Argyris and Donald Schon, *Theory in Practice* (San Francisco: Jossey-Bass, 1974.)

Although Argyris proposes this learning to take place once the organization has executed work resulting in undesirable outcomes, it could theoretically be applied at the work's commencement and each step along the way to implementation and execution. This, of course, would require having data from similar bodies of work that are further along and have implemented programming to the point of getting at least one or two rounds of results. This is especially relevant for career pathways initiatives, because most of the partners at the table 1) have not worked in such intense collaborations before and 2) are tackling work they have little context for or experience doing. In these cases, the challenges presented are no doubt adaptive in nature, and although technical solutions can play a role in their resolution, learning must certainly be prioritized. Thankfully, in

Tennessee for instance, there are nine regional efforts underway and all are at distinct points of life, so there are many lessons to learn from one another.

Although often referred to in somewhat disparaging terms as "building the ship as we sail," Amy Edmondson (2012) describes this dynamic in more idyllic terms as "Execution-as-Learning." This way of operating is a combination of continuous learning and high performance. Although all organizations would seemingly like to operate in this fashion, execution-as-learning is only enabled by organizational cultures specifically designed to prioritize organizational learning. This organizational culture must then be coupled with constant "teaming," the process of organizations practicing teamwork on the go. Execution-as-learning is unmistakably found in organizations that relentlessly seek out a multitude of minute, unexceptional learning opportunities in all aspects of routine, daily work (Edmondson, 2012). Kegan and Lahey (2016) describe a similar model in adult development terms as being a Deliberately Developmental Organization (DDO), designed to maximize opportunities for individual and collective growth. All aspects of DDOs are intentionally focused on their employees' desire to grow both personally and professionally, including hiring practices, feedback cycles, meeting times, and establishing roles and responsibilities. This focus on the individual to fuel the growth of the organization aligns well with Peter Senge's (1990) assertion that, "Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs" (p.139). However, it is essential to note that individual learning does not come easy, and learning is almost always preceded by some inner change that opens an individual up for the new learning to enter and replace the old ways of thought.

Change Theory

Dr. Martin Luther King Jr. once stated that "Change does not roll in on the wheels of inevitability, but comes through continuous struggle." In his chapter entitled "Change is What it Means," educational leader and author Robert Evans (2010) reminds us that when it comes to schools and new initiatives, change is almost always met with uncertainty at best and opposition or flat out defiance at worst. This is most likely because change in schools forces educators to "abandon something they know how to do and adopt something they don't know how to do. (Evans, 2010, p. 43)" From my own experience as a school leader in a growth-minded school focused on constantly improving, this meant implementing new reform initiatives almost yearly, which were often not initially welcomed with open arms. Building vision and ownership towards adoption was always a process. Evans points out that these reforms, which leaders tend to embrace through rational thought and understanding, cause a disturbance to the patterns of existence teachers and educators throughout the building have come to find comfort in, even when these very patterns lead to hopeless situations. As humans, our need for continuity often outweighs our need for happiness or success, allowing us to put up a fierce resistance to something that could actually improve a classroom situation (Evans, 2010). Evans goes on to say "One cannot hope to implement change without persuading people that it is necessary. (2010, p. 45)"

Therein lies the real challenge with reform implementation and change management in general. Evans makes clear one cannot convince based on rational argument alone, but short of forcing change down someone's throat, how can we help open hearts and minds to the changes that are deemed necessary? One solution is by

using the conceptual change framework, especially as described by Strike and Posner (1985). The framework terminology is far less important than the ideas they represent. Their proposition helps participants willingly "trade up," choosing a new solution for themselves over the prior insufficient pattern(s) they previously employed. The first step of this framework is to create dissatisfaction with the previous pattern, essentially helping the participant realize on their own the insufficient nature of the current plan or pattern. This can be done through providing new or different information to counter someone's currently held misguided or even false beliefs. It can also be done by highlighting something most never consider, the dangers or negative outcomes of maintaining the status quo and not trying something new (Evans, 2010).

In this model, one would heighten the anxiety of homeostasis, which is the fear of not trying, and lessen the fear of actually trying something new. While Strike and Posner simply argue that one must introduce doubt into a person's current belief system, Evans takes it a step further to say that leaders should apply pressure on the old mindsets coupled with support for embracing the new. He suggests that it is insufficient to simply provide the "how" and the "what" of the proposed change without also first providing pressure through the most important piece, the "why." This still remains the most difficult step towards the change, due to people's freedom and ability to reject, ignore, compartmentalize, and/or conform the newly proposed ideas into their previously held mindsets (Strike, 1985). In some ways, however, linking the old ways with new can be comforting, and supporting people in forming these links of continuity can actually help build momentum towards overcoming their hesitancies and resistance to the new (Evans, 2010).

Though the focus to begin any change movement is on the "why," the "how" and the "what" are critical in helping move people from the doubt of their pre-conceptions to the full embrace of the new model, steps 2-4 of the conceptual change framework. The "what" comes into play in providing people with a minimal bar of understanding of the new proposal and in what ways it will help improve the situation (step 2, Intelligibility). From there, the "how" comes into play, as people must begin to believe in some level of plausibility (step 3) that the proposed change will actually lead to the outcomes that are hoped for. This rationale will never be achieved without people simultaneously feeling support from the person leading the change, coupled with their own internally recognized change. As the support is applied and understanding of both the proposal itself and the reasonableness of its implementation and success are realized, the fourth and final step of the conceptual change framework (termed fruitfulness) can be achieved. The change is finally seen as the positive it was portrayed as, and people begin embracing it as their new constant, becoming more satisfied with the new way while increasing their willingness and ability to disassociate with the old (Strike, 1985).

Evans (2010) points out that the key to all of this is the right balance of pressure and support. He is backed by Michael Fullan on this, who has written "Pressure without support leads to resistance and alienation; support without pressure leads to drift or waste of resources" (2001, p. 91). In the theoretical world, this makes perfect sense, but in reality, policymakers and practitioners struggle mightily to find this perfect balance. I will speak to this further when discussing capacity building with a focus on supports.

Unfortunately, as Fullan (2006) points out in reflecting on Argyris's work, neither espoused theories nor theories in use are sufficient to actually produce noteworthy

change. We now know espoused theories are at times little more than pipedreams, but even theories in use, without clear articulation around action steps, do not produce desired change. Leaders and stakeholders must push beyond this to make their theories actionable, linking their assumptions with the strategy to then produce their desired outcomes. Fullan spends a good bit of time describing educational change theories that do and do not work, to provide a jumping off point for leaders as they begin their change implementation. Some fundamental aspects of change theories that Fullan (2006) finds to be flawed are:

- Strategy absent contextual consideration of school and system culture
    - Elmore (2004) points out that believing in change and learning to do new things outside of the setting to which it needs to be done is pointless.
- Systems level change that ignores the needed changes in practice at the instructional core.
    - Changes in teachers practices must be articulated
    - What supports schools need to provide students must be articulated
- Strategy focused on implementing new initiatives rather than changing fundamental behaviors and culture
    - Reform initiatives and innovation often are understood as fads or "flavor of the year" changes that will come and go
    - Initiatives can often go well in one locale and poorly in others, while the need is for systems level collaborative learning
- Reforms contingent on talent leaders and stakeholders driving the change

- There will never be enough superhuman educators to drive all the necessary change
- Most educators are capable of implementing positive reforms, but systems and surrounding conditions often dictate what is achievable.

Fullan (2006) then goes on to highlight theories deserving of merit, and from those he highlights seven core premises that can be applied to effectively use change knowledge in reform implementation.

1) A focus on motivation
2) Capacity building, with a focus on results
3) Learning in context
4) Changing context
5) A bias for reflection
6) Tri-level engagement
7) Persistence and flexibility in staying the course (p. 8)

Fullan contends that motivation is instrumental for success, and the other six must play a large role in building this motivation over time. Initial roll-outs always encounter rocky starts, but motivation and engagement must build momentum towards scale over time or the initiative is doomed. Capacity building with supports hinges on developing individual and collective knowledge, competencies, resources, and motivation. In short, new initiatives cannot succeed without people first developing new capacities. As earlier mentioned, isolated learning is meaningless if it cannot be applied to the context where the learning is needed. Elmore perfectly captures this in saying, "Improvement is more a function of learning to do the right things in the settings where you work" (2004, p. 73).

This learning in context must then have the effect of fundamentally changing the larger context within which the desired changes are being implemented. Capacity building and learning alter context, which can lead to increased lateral capacity building," or system-wide knowledge and increased motivation.

Linking back to Edmondson's work on Learning-as-Execution, a bias for reflective action enables the first four premises to jointly progress. We must be mindful that all change, and even the vision-setting to drive the change, is a process, not a single event. Because we believe people learn best by cycling through action and reflection, hopefully reflecting all the way back to the governing environment as Argyris proposes, this premise forces the use of evidence to inform action throughout the learning-doing process. Fullan defines tri-level engagement as that which includes the school/ community, district, and state. For the purposes of career pathways work, it is critical to add even further complexity and include all stakeholders, especially those private sector employers and non-education public agencies who play such an integral role in the work. Thankfully, the goal here is not to have all in perfect alignment, which would be an impossible task in and of itself, but to cultivate engaged leaders with permeable connectivity, that is "pursuing strategies that promote mutual interaction and influence within and across" all levels (2006, p. 11).

The final premise, persistence and flexibility, which Fullan best describes as resilience, provides the necessary time to navigate the complexity and missteps sure to be encountered when implementing any kind of change theory. It is critical to match or even surpass the levels of pushback with rigid persistence to ensure setbacks and resistance do not thwart the entire plan. The persistence aspect again stresses how

essential sustained commitment is, especially among stakeholder organizations who constantly evolve through a variety of life cycles. Because the supporting systems and partners are constantly experiencing an unstable institutional equilibrium, it becomes necessary that a group of stakeholders representing these partners are implicitly or explicitly authorized to influence beyond the bounds of their individual organizations. With systems under continuous shock, these influential stakeholders must accept system maintenance as part of their role. This requires thinking of themselves as citizens of the system responsible for maintaining the system beyond the commitment to their own organizations. Though this will never correct to the point of stabilizing institutional equilibrium, it can prioritize stable shared commitment to achieve and sustain the best delivery system possible (Ferguson, 2017).

Others have proposed similar change leadership models, and most have a similar process in place that can be summarized as: plan, set vision, engage, support, pilot, reflect, implement, reflect, improve, reflect, etc. The formula is not overly complicated, but the implementation of the theory of change often is. That is why learning is such a critical part of each and every step of the process, and why organizational learning has emerged as one of the most fundamental elements of capacity building for cross-sector groups.

Implementation as Learning

Over the past several decades, as education spending ramped up coupled with the public desire to produce measurable outcomes as a result of the spending, many educational reforms (for better or for worse) have been proposed, and at times implemented, across the country. In almost every case, decision-makers are looking to

push forward proposals that are equipped to meet at least one of two qualities: 1) Ability to be implemented 2) Likelihood to lead to improved student outcomes (Honig, 2006).

Focusing in on the first quality, one inherent problem with most implementation efforts is the disconnect between those who create the policy or initiative and those who are charged to enact the policy. In *Deliverology in Practice (2016),* Sir Michael Barber presents this as a uniquely American problem, where too many decision-makers produce policies absent thoughtful consideration of the challenges and realities of ground-level implementation. In the United States, most often policies are created by legislators, then passed down to practitioners to create rules and regulations to enact and implement the legislation. Barber notes that there are both positives and negatives to our system's separation of powers, but posits that most other countries write policies that *are* implementation plans. This intrinsic reality check helps curb policies and reforms that are reactionary and driven by an emotional response to an isolated event, rather than a necessity or wide-spread need. It also helps eliminate some of the change theory challenges mentioned in regards to top-down mandates that are neither wanted nor understood by those charged with implementation. Because our system of governance is unlikely to dramatically shift in the short-term, the gap between policy and implementation must be addressed from a different angle.

Meredith Honig confronts many of the issues associated with this challenge in her collection entitled *New Directions in Education Policy Implementation: Confronting Complexity (2006).* Honig writes that "Recent shifts in education policy increase the urgency to… support the implementation of school-community partnerships," (2006, p. 125) or what she refers to as "collaborative education policy." She advocates strongly for

policy to be created in reverse fashion, to build the policy based on what is already happening in practice with school-community partnerships, "rather than mandating local practice with policy" (p. 126). With a focus on organizational learning as implementation, the oversight role of regulation and compliance must shift to a supportive role. Unfortunately, there are few models for building education policy from practice and most decision-makers are far more comfortable and familiar with the opposite, building policy to mandate practice.

Building on some of Argyris's work (1996), Honig advances the need for decision-makers to readily engage the right balance of search and use of information to lead organizational learning towards building policy from practice. Too much "search" of ground level practice and expertise results in information overload, making it difficult to put any of it to use in making policies. An overreliance on using the information gathered then leads to outdated information and decisions being made that may not fit the current context. The question remains, how do you know what the right balance is? Because of both the complexity of career pathways work and ambiguity in current practice of measuring outcomes, Argyris (1996) would advocate for a process view of organizational learning where it is assumed to be taking place contingent on organizational actors engaging in both search and use activities appropriately and in ways that the authorizing environment deems valuable. Another function of the decision-making body is to limit risk through search and use of information by gathering information (the more information, the greater the risk of success or failure), then putting it to use by narrowing actionable alternatives, thereby reducing risk of extreme success or

failure. Additional research sheds light on the following specific environmental conditions that tend to support organizational learning in ambiguous settings.

- A mandate for change, such as a threat to organizational survival
- Positive past experiences engaging in search and use activities
- Occasions to intentionally interact with the external environment (enables searching)
- "Boundary spanners," subunits or periphery organizations, designated to conduct search
- Preemptive policy action to clear barriers
- "Collaborative capital" skillfully supporting the interactions
- Site-based knowledge and expertise to share with decision-makers creates a base for the policy to be built from (p. 126)

Though some of these conditions are more naturally occurring across individuals and organizations, others, such as taking preemptive policy action, are choices to be freely made (or bypassed) by all organizations.

Theory of Action

Because the success or mediocrity of career pathway initiatives largely hinges on the ability or inability of intermediary organizations to navigate this process of learning and executing, it would be helpful for those organizations to have some concept of existing capacity from which to begin their learning. To effectively build their capacity, one must trust that the starting point is an accurate baseline of current capacity. Because the state of Tennessee works with a number of intermediary organizations with a wide variety of governance structures, member compositions, resource availability, and years

in existence, it is critical that each individual intermediary is provided the right balance of customized supports and accountability for results. Although my overarching theory of action is about building capacity to execute the work, establishing the initial starting point for learning is incredibly important. Therefore, my theory of action for where to begin this work is as follows:

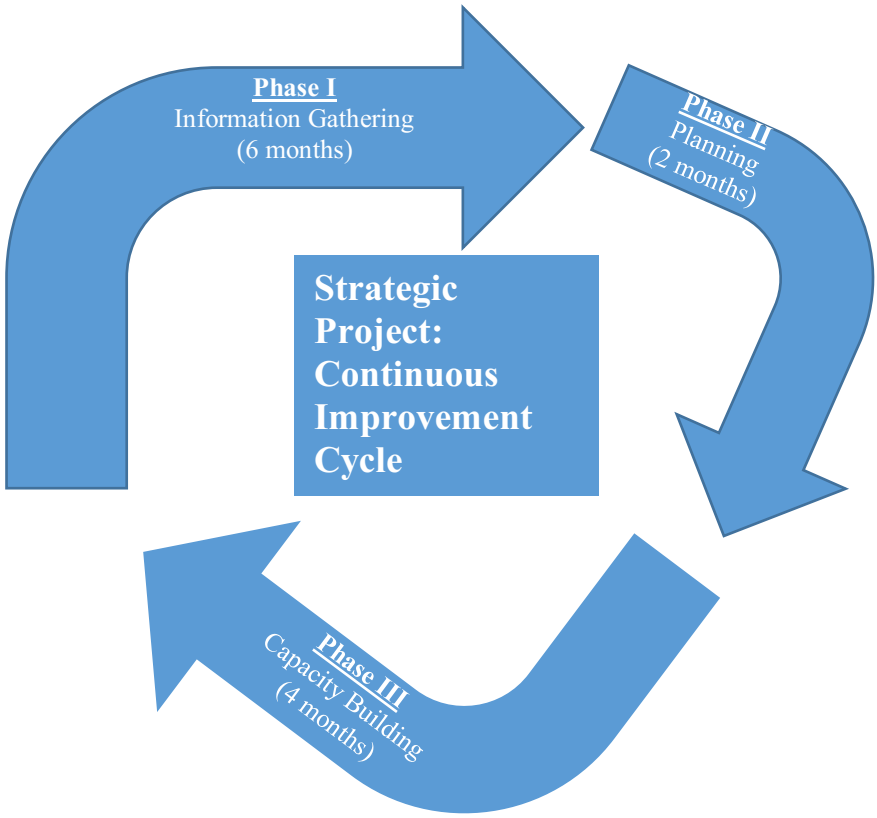
> ***If** I can create effective diagnostic tools for Pathways TN to establish regional baseline capacity to implement career pathways, and if I can design processes to convert this metric into a customized learning and capacity-building strategic plan for regional intermediaries to enact towards their goals,*
>
> ***Then** each regional intermediary will be well-supported for growth in their specific areas of need in order to effectively implement high-quality career pathways throughout the region.*

Strategic Project Description

As I embarked on my strategic project with JFF, I knew that I wanted to focus my efforts around a project that would be beneficial to JFF and its partner(s), sparked my personal and professional interests, served a purpose beyond the scope of this Capstone, and would help me towards achieving my previously mentioned goals for the year. My interest in the Southeastern region of the United States stems from both my affinity for the region having grown up there and from my professional experiences teaching and leading schools there. I am convinced that poverty and education (or mis-education) are inextricably linked, and there is no clearer picture of the shortfalls of poor educational systems and opportunities than in the Southeast. Conversely, I also believe that no other region is more primed for educational success and improvement than the Southeast, thanks in large part to the willingness of private sector partners to own their workforce and talent development throughout the region. For these reasons, I worked with JFF to co-create this strategic project to help assist Pathways Tennessee to reach the next step in implementing their career pathways movement. Having spent most of the year working alongside educators, workforce trainers, private sector employers, and public sector leaders, I am convinced that career pathways can radically shift educational, economic, and life outcomes for young people throughout the state of Tennessee, and ultimately the Southeast region and nation at large.

My strategic project was executed in three distinct phases, with the first phase, Gathering Information, consuming as much time as the other two pieces combined. The graphic (see figure 7) below displays both the project phases and relative time frames. Additionally, this graphic is in a continuous form, as this project is viewed by Pathways TN as an improvement cycle that will continue well-beyond my residency time.

Figure 8: Continuous Improvement Cycle



Phase II focused on Planning, a constant back and forth collaboration between me and Pathways TN to ensure I was both analyzing the data correctly, drawing the right conclusions, and creating appropriate deliverables and training artifacts as a result. The Pathways TN team gave thoughtful feedback and direction throughout this phase to ensure the project was going in an agreeable direction. Phase III put all of the previous eight months' work to the test. During the Capacity Building phase, we conducted an existing region retreat, new region onboarding sessions, and generally supported all regions statewide to analyze their local data in order to formulate a strategic plan covering their work for the following year. This phase both equipped our local regions and also empowered them with confidence to initiate the next stages of their pathways

implementation. Though the nine regions are at a variety of stages of progression, we took the approach that all regions would start with where they are and the resources at their disposal to then push their pathways to the next level towards high-quality options for all students in the region.

Phase I: Gathering Information

As the timeline of Phase I indicates, my theory of action stresses the importance of information gathering prior to taking action through strategic planning. My efforts in this regard were boosted by the many years of data and work that the PtoP team had already gathered and invested, respectively, in the Pathways TN initiative. Having been the longest-standing state in the PtoP Network, several members of the JFF team intimately know Tennessee and its career pathways efforts, and provided a great deal of insight throughout my information gathering process. Tennessee had also recently received a small planning grant from the first phase of the CCSSO/JP Morgan Chase Bank New Skills for Youth (NSFY) initiative. This awarded grant proposal, co-authored by JFF, created a funding stream for Pathways TN to continue expanding pathways programming throughout the state (beginning with asset mapping new regions) and conducting additional research with regions that had previously implemented pathways to some degree (primarily through regional focus groups). It also provided funds for the Pathways TN State Summit, which I will address in more detail later in this section.

Asset Mapping

To help create effective and informed partnerships, the PtoP team often begins with an asset-mapping activity for the region with which they will be working. This serves at least three primary functions: 1) To help PtoP become intimately familiar with a

region 2) To provide a realistic mirror for the region to view itself 3) To assess the resources, opportunities, and key players present within a region in order to assemble a team to carry out the eventual plans. According to internal JFF documents (2016), this process helps identify leaders with both "motivation and muscle" to carry forward the work the region ultimately plans and pursues, thus informing the design and composition of the partnership model.

As earlier mentioned, organizational capacity to execute according to the agreed upon roles and goals of the partnership are essential, but by no means is capacity the only ingredient to perfect this recipe. The asset-mapping interviews were tailored toward specific stakeholders and their respective institutional structures, and they revealed such critical characteristics such as mindsets, collaborative nature, willingness to learn, capacity to execute, and focus on equity.

By its very nature, the asset-mapping protocol is an imperfect science. Through an extensive series of audience-targeted questions (Appendix Item 1) rifled out to interviewees throughout the protocol, one hopeful outcome is the emergence of an accurate revelation of who the right organizations are to join, or even form, the partnership. The protocol certainly helps eliminate the wrong participants, but it also likely qualifies to create false positives along the way. Only the groups who appear to match our up-front hypothesis about which organizations will be the right fit get invited to participate in the asset-mapping process. No doubt, groups that have shown a willingness to engage and taken the initiative to commit resources (time, money, and talent) to the process emerge as key possibilities to include, at a minimum. Depending on the amount of said resources committed, certain voices become even more likely for

inclusion, whether or not the other characteristics signal the organization to be a good fit for the partnership.

Unfortunately, however, not all invitees showed up for asset mapping, and as the previous paragraph indicates, not all organizations and individuals who should have been invited were extended a seat at the table, which raises this question: Which individuals and organizations should participate in asset mapping? In my early experiences asset mapping communities throughout Tennessee, I found that those lacking positional authority or formal power were often the first left out of the conversation. Likewise and unsurprisingly, asset-mapping interviewees in many communities often lacked diversity across a broad range of identity markers, but most notably those of race, gender, age, and socio-economic status. The deeper I got into the project, the more I realized how desperately the marginalized subgroups that partially composed "all students" in Tennessee needed representative voices advocating for them.

There is an answer, however, to this question of who should be at the table, and it is one that was derived through research rather than gumption.

> We are now coming to realize that participation should be related to competence to solve problems effectively; and such competence in turn is related to internal assumptions, not to whether people are superiors or subordinates, male or female, young or old, or members of a minority or the majority. (Argyris, 1974)

That said, identifying competence, a subjective measure, proves to be extremely difficult and would likely be left to the empowered in a community to decide. There also quite likely qualities within specific communities, or individuals within those communities, that make them more or less ripe for radical inclusion.

Knowing that the composition of partners and how they specifically organize and act largely defines the collaboration's ultimate success, an obvious takeaway is that there is some combination of ideal fits that career pathways initiatives should strive to create in these partnerships. In other words, it is critical to both have the right people and groups at the table and to organize their learning and work-streams strategically towards specific ends. Unfortunately, there is scarce research or evidence of what organizations, organizational characteristics, resources, and motives are most optimal for the collaborative work of career pathways. To add some additional nuance and complexity, even if this knowledge base was available to the field, questions surrounding external validity would remain. In layman's terms, it matters how much the findings differ based on the regional context itself, or even the region's desired outcomes, as each local pathways effort is inherently unique. This was one of the primary reasons I shifted my project focus away from group composition to instead focus more intently on how cross-sector partnerships and their individual and collective work streams are organized for learning and implementation.

Six of Tennessee's nine ECD regions had previously been asset mapped by JFF teams. Additionally, Rutherford County, situated in the Northern Middle Tennessee region, was so anxious to push the work forward that they too had been asset mapped to kick off their efforts as a stand-alone sub-region. I spent much of my time during Phase I learning about these regions through their individual asset-mapping reports. I would be charged with leading similar asset-mapping efforts across the remaining three regions, Northern Middle Tennessee, Southern Middle Tennessee, and Greater Memphis, a process I will describe in more detail below. I would also end up writing two of the three

asset-mapping reports for these new regions, one of which is attached as Appendix Item 2. The table below (Figure 8) highlights each of Tennessee's nine ECD regions and their timeline for joining Pathways TN as an official partner.

Figure 9: Pathways TN Regions

Region Nickname	Region Size-Counties	Region Size-Population	Pathways Tennessee	Asset-Mapping Dates	Regional Intermediary Established
Upper Cumberland	14	345,381	2013	Fall 2012	2013
Southeast TN	9	643,198	2013	Fall 2012	2013
East TN	16	1,208,604	2015	Spring 2016	N/A
Northeast TN	8	506,892	2015	Spring 2016	N/A
Northwest TN	9	250,254	2015	Spring 2015	2015
Southwest TN	8	250,308	2014	Fall 2013	2014
Northern Middle	13	1,894,935	N/A	Summer 2016	N/A
Greater Memphis	4	1,066,040	2016	Summer 2016	N/A
Southern Middle	13	434,687	2016	Summer 2016	N/A
*Rutherford County	1	298,612	2015	Fall 2015	2016
Totals	95	6,898,911			

After receiving my assignment, I began to collect as much relevant data as possible about the regions I would be asset mapping during Phase I. I learned that it was no coincidence that two of the three unmapped regions, Greater Memphis and Northern Middle Tennessee, were the state's most densely populated and demographically diverse regions and also had the most political activity. They each had been a focus of much of the state's education reform efforts, primarily through the creation of the Achievement School District, the state's primary mechanism for taking over and turning around failing schools. State intervention generated a number of conflicting statements across those we interviewed, providing rich insight into the regions. Initial desk research, a critical component of asset mapping, also revealed that they had many initiatives in the realm of career readiness and workforce training, such as Nashville's wall-to-wall high school

academies model, but that none quite met our full definition of career pathways. I also learned that the third unmapped region, Southern Middle Tennessee, was primarily composed of rural communities and had many associated challenges, such as lower per capita incomes, lower educational attainment rates, and fewer postsecondary educational options. The pre-work I conducted prior to asset-mapping interviews better prepared me and my colleagues to have a general understanding of each region prior to setting foot there. I analyzed regional, county, and city/town demographics and statistics along with real-time and future labor market information (LMI) to ensure I had context going into the interviews.

Over the course of three months (June-August 2016), I led a team comprising me and two other JFF colleagues to conduct asset mapping in these three regions. The team approach is critical for a number of reasons, though mainly for data capture and to quickly establish trust. One colleague's role was to transcribe notes, as interviews last roughly 45-60 minutes each and can often take up ten single-spaced pages each. Once the interviews were completed, I analyzed these notes to draw out summaries and conclusions that I used within the reports. Since nearly every interview involved someone whom we had never met, it was also essential to build trust and push beyond surface answers with our interviewees. Having one colleague type the whole time allowed my other colleague and me to be fully present with our interviewees. The two of us often teamed to get at the reality of circumstances on the ground by building upon initial lines of questioning the other may have started. In essence, if I did not feel like the answers to my colleague's questions reached the level of depth that exposed the actual circumstances, I could chime in to ask for additional clarity or ask more targeted

questions in response to the initial answers I was hearing. These strategies allowed us access to our interviewees' most candid thoughts about what they were seeing, experiencing, or doing in their daily work.

Each Phase I asset-mapping visit lasted two days on the ground in each region, followed by more desk research and follow-up phone conversations. Though our Pathways TN partner organized and arranged our initial conversations and interviewees, I often took liberty to include additional participants based on conversations we had and new learnings that emerged. Likewise, as I began writing the reports, which are organized along pathways levers (such as employer engagement or career counseling and advising), I often found gaps in subsections which I then needed to either conduct additional research to fill or accept as serious flaws in the foundation of that region's pathways assets. As I completed each asset-mapping report, I then handed them off to the Pathways TN team for any additional reflections and feedback prior to publishing them, though I never received anything substantive. I interpreted this positively, because the state was ultimately using us, an outside organization, to provide cover by painting an unbiased picture of what we observed throughout the process. Ultimately, the final asset-mapping reports were made available to the regional participants and interviewees to use as a foundational tool for informing and establishing a career pathways initiative.

Because many of the regions had been previously asset mapped, in some as long as three years prior, it was also essential to learn about the progress and developments of regional pathways work in these regions since JFF's previous engagement. As an additional aspect of Phase I information gathering, I worked with the Pathways TN team to conduct regional focus groups in four more mature regions to inform us of their

progress over the years. JFF had previously developed a site visit rubric for career pathways evaluation, and we adapted this rubric to develop a tool (see Appendix Item 3) to guide regional teams through the focus group process. Though I was unable to be present for all of the regional focus groups, the one I attended gave me great insight into the information gathered and the constraints of the process. Similar to the asset-mapping process, I was provided all the notes from the focus groups to analyze for both collective statewide findings and unique regional affects. One of the most productive strategies I undertook was to compare regional focus group findings to a region's asset-mapping report, which illuminated a number of positive outcomes and continued challenges for each of the four regions.

The information I gathered and analysis I conducted, critical for the purposes of my strategic project Phase I, also served the purpose of informing a state Needs Assessment I shepherded and wrote for the second phase application of the NSFY grant. I conducted another day-long series of interviews at the TNDOE to ascertain state-level supports, policy, and leadership for the Pathways TN initiative. Along with Education Department leaders, I interviewed leaders across multiple state agencies, including ECD, Labor and Workforce Delivery (TDLWD), and higher education (THEC), with representatives from both community college and the Colleges of Applied Technology (TCAT). Using a framework adapted from Advance CTE (see Appendix Item 4), I asked a number of questions targeting the state's overall career pathways system and policy environment. These targeted questions focused heavily on equity, employer engagement, and cross-sector partnerships, the underpinnings of all strong pathways systems. These conversations highlighted many foundational supports that Tennessee had in place, but

also revealed a number of gaps they have yet to address. This Phase I Needs Assessment served as the first comprehensive statewide evaluation of Tennessee's success, progress, and upcoming challenges to provide all students throughout the state with high-quality career-focused education.

The final piece of the Needs Assessment, as required by the NSFY Grant application, and a missing component of much of my initial Phase I research, was a comprehensive Data Analysis Report that examines student outcomes. Throughout my time on the ground in Tennessee, most of my interviewees relied on anecdotal evidence and personal perceptions rather than objective data. Additionally, many of the previously mentioned foundational pieces that were widely celebrated throughout Tennessee had often been discussed in terms of being "great in theory, but not necessarily in practice." These reasons made me anxious to get my hands on the numbers from the state's P-20 Data System, a process that took approximately four months from my initial ask to finally seeing the numbers firsthand.

The Data Analysis report, assembled by TNDOE, (see Appendix Item 5) was extremely thorough, moving beyond the NSFY grant requirements and looking at a number of metrics in the most conservative, and, in my view, appropriate light. Many of NSFY's metrics allowed for the states' interpretations of how to assess what the metric was asking for. For example, one such data point is the percentage of students with "Access to High-Quality Education-To-Career Pathways." As one could imagine, defining "High-Quality" is the first challenge to constructing this metric because the term itself is so subjective. The TNDOE defined high-quality programs as those containing four essential components: 1) Secondary CTE program of study with a minimum of three

sequential courses 2) Culminating work-based learning experience linked to the program of study 3) Industry certification linked to the program of study 4) Postsecondary instructional program linked to the program of study. This level of thought and rigor went into the entire Data Analysis report, and the metric described above is just one of five indicators thoroughly examined, the other four being Learning Pathway Completion, Early Postsecondary Attainment, Industry Certifications, and Education and Employment After High School. Additionally, each metric was analyzed at a number of levels, with most being disaggregated by a number of demographic measures, such as race, gender, disability status, and geographic location. This in-depth report provided an abundance of data related to equity that I will consider further in the *Analysis* section.

Phase II: Collaborative Planning

Phase II of my project consisted of Collaborative Planning between me and the Pathways TN team. I used all of the above-mentioned data points to inform my original theory of action and chart a course for supporting regional intermediaries in Phase II of the project, but the tools and analysis conducted to this point were still insufficient for directly informing how to strategically support the growth and learning of regional intermediaries in their specific areas of need. With each region serving a unique role in the state pathways system and having a vast array of strengths and struggles, I needed to further understand regions at their individual level, starting with the one designated staff leader whose job, ideally in a full-time capacity, was to direct that region's pathways efforts. I created a survey for regional leads to help inform their own capacity, their regional intermediary's effectiveness, and to gauge the perceived progress they saw in their region since it's pathways inception. The questions within this survey specifically

inquired among other things their region's diversity (or lack thereof) both on student and stakeholder fronts, their practices as an intermediary unit, from meetings to evaluating outcomes, and finally their capacity to source and use data as part of their on-going and cyclical regional analysis.

I created two additional surveys to provide a more complete assessment of the region, each targeting the perceptions of regional intermediary or steering committee members and unofficial stakeholders in the regional pathways initiative, respectively. I planned to use this data to get a more complete understanding of internal and external perceptions, and agreements and misalignments, similar to how a 360-degree leadership survey evaluates an individual by comparing and contrasting their self-perception, superior's perception, and subordinates' and colleagues' perceptions. The final piece of my own data analysis was to compare all of the data, both objective statistics and subjective perceptions, to discern as realistically as possible where a region stood in regards to implementing high-quality career pathways. From my earliest asset-mapping conversations I had suspicion that much of the positive work I was hearing about would not account for the realities of Tennessee's student outcomes. I raised numerous questions about equity that produced a variety of uncertain responses. I also listened for what was not being said, and in many communities, the high-flyers and exceptional programs for the privileged few were constantly flagged for us while the marginalized students in the area, whether by race or class, were often left out of the discussion.

Throughout Phase II, I had twice-weekly phone meetings with the Pathways TN team to process the data and conclusions that surfaced and to discuss implications for our planning. The Pathways TN team, itself having far less human capital, and therefore

capacity, than they needed for this work, would raise questions, provide feedback, set general direction, and then allow me to put the planning pieces in place for each region's next steps.

Phase III: Capacity Building

Phase III of my strategic plan, Capacity Building, largely involved incorporating learning opportunities into a series of ongoing, coordinated activities in which Pathways TN engages regional partners. I set out to organize Phase III activities by each region's history, progress, and needs as determined by Phases I and II. Phase III activities, launched with the third annual Pathways Tennessee State Summit in late October 2016, for the first time included all regions throughout the state. One primary reason to start all the new regions off with a statewide summit was to concurrently introduce them to the work and to neighboring regions who have been engaged in the work and are already achieving results. Though we encouraged innovation and adaptation in each region, I hoped a positive byproduct of delivering capacity-building activities in multi-region groups would be groups sharing their success stories and best practices with one another and supporting each other's learning, growth, and improvement.

Additionally, in January we hosted a regional intermediary retreat for the four most accomplished regions in Pathways TN: Upper Cumberland, Southeast Tennessee, Rutherford County, and Southwest Tennessee. These four regions have well-established intermediaries, full-time staff leadership who are also each two plus years on the job, and they each have significant buy-in from their most essential regional stakeholders. Each has made significant strides to instituting high-quality pathways and are now at a point that they have one or more of these pathways in place.

For the newer regions, the Pathways TN team will be facilitating on-site onboarding sessions to walk each new region through the early steps of launching a career pathways initiative. During the planning phase, I began working with the Pathways TN team to create an on-boarding guidebook that breaks the first year of a new region's work into accessible and achievable work streams, complete with descriptions and guidance about the tasks and deliverables to reach desired outcomes. This plan began as a fairly straightforward document, with initial hopes to complete by late December. Unfortunately, as priorities shifted and Pathways TN engaged in some internal restructuring, clearance to progress this document stalled and it is still in the process of being implemented.

This led to one of my biggest takeaways from the work, which I will discuss in much more detail in the analysis section. Though the three-phase plan for informing, planning, and implementing capacity building among the Pathways TN regional intermediaries seemed relatively sensible, executing such a plan within the oversight and coordination of a state department of education led to a number of hiccups along the way.

Evidence and Artifacts

What I sought to do and what I was able to do, to this point in my residency, have brought me a sense of accomplishment, instances of frustration, and above all, massive insight into the nature of this highly collaborative work. I initially expected to execute the three phases of my project in sequential order. I would gather the necessary information (Phase I), work with Pathways TN to co-plan our capacity-building activities (Phase II), then implement the capacity-building elements (Phase III) to help strengthen the regional intermediaries. In reality, each phase was much more interconnected and

overlapping than I imagined, and none were nearly as isolated or achievable in the narrow sense I had hoped. Much of my success came in Phase I, which compared to the latter two phases, I executed more according to plan. Aspects of Phase II and Phase III are still on-going, and will continue to be worked out over time as I continue to team with Pathways TN as a PtoP network partner.

The three primary deliverables for Phase I were asset-mapping reports, focus group findings, and the statewide needs assessment, all of which I played a large role in leading or supporting towards completion. My successes in these tasks were in large part due to my comfort operating and executing in the settings in which this work was done. Many issues plaguing the Deep South are rooted in history and complicated, to say the least. However, many aspects of the present-day South are rather predictable and fairly easy to navigate. For starters, a firm handshake and solid eye contact go a long way in establishing trust right off the bat. Additionally, as I introduced myself and mentioned having grown up "right down the road in Huntsville, Alabama," no more than three hours from everywhere I visited in Tennessee, it automatically established more trust and credibility. With this in place, the conversations I had and information gathered in Phase I felt both reliable and actionable, displaying each region's earnest engagement in moving their career pathways closer to the ideal from the Pathways TN framework.

In order to have some semblance of statewide coherence, it is critical that Pathways TN and JFF provide some boundaries and non-negotiables to support the work and ensure that regions are all striving towards a common definition of high-quality pathways regardless of the inputs, assets, and challenges they face. The Frameworks are important for two primary reasons. First, this work is not decidedly established

nationally, leaving room for interpretation of best practices and ideal structures. Additionally, because each region in Tennessee is unique and autonomous, they need to have clear expectations for which aspects are flexible and which are required as they develop their local pathways.

With the PtoP and Pathways TN Frameworks as the foundation and Pathways TN's mission serving as an additional guide, I first scanned each region for the bare essentials, primarily focusing on the "who" of regional intermediaries. For starters, is there someone leading the work on a daily basis? Next we must ensure that person is not alone, even if most of the others take the pathways work on as an additional "hat" they wear among their other professional roles and responsibilities. This often takes the form of a steering committee, but the name or governance of the organization is less important than the composition and capacity to learn and execute. From here, I sought to see if the group leading the effort was regularly meeting, communicating, and hopefully conducting subcommittee meetings to execute on the plans in place. Finally, as captured in the figure below, I considered whether the group is composed of the right stakeholder representatives to ensure all pieces are in place to ultimately forge the partnerships and programming required for high-quality career-focused education.

Figure 10: Regional Intermediary Stakeholder Composition

Full-time Regional Lead	Steering Committee	Regular Mtgs	Sub-commit-tees	Public Agency Rep.	Work-force Rep.	ECD Rep.	K-12 & P-S Ed Rep	Region-wide Participation
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Some of this information I gathered through the regional lead survey I created with feedback from the Pathways TN team (see Appendix Item 6). Some regions are still so

new to the work that the asset mapping I conducted directly informed my answers. One region, which was first asset mapped two years ago, is restarting from scratch, looking for a new regional intermediary to lead the work because of the lack of progress previously made in the region. One abundantly clear result is that while all regions were moving in the right direction, they all still have a long way to go. The four most senior regions have many of the most crucial elements in place, but in many ways, they too are just getting started. For instance, no region has all counties engaged, so while many programs from the TNDOE are available statewide, not all districts have aligned programming to ensure all students have access, much less equitable access. Though many of the programs have strengths on one side of the high school-to-postsecondary spectrum or the other, few are providing seamless, vertically-aligned pathways from ninth grade through postsecondary credentials, inclusive of work-based learning.

The focus group findings revealed that, even within the more mature regions, many of the engaged counties were at different places on the progress continuum. A portion of the focus group agenda had participants grouped in job-alike groupings, while another portion of the day had participants separated by county. It was clear throughout both groupings, in all four focus group events, that certain participants representing their various geographies or job functions had a much stronger grasp on the core concepts of pathways than others, many of whom were new to the work. An overview of the focus group results and recommendations can be found in Appendix Item 7, though we conducted more specific analysis for the Needs Assessment prior to summarizing the data.

The most important outcome we achieved over the past nine months was to asset map all regions and strengthen their connections to the statewide efforts of Pathways TN. From the final three asset mappings, we found that all regions had a number of pathways elements in place, but we found few instances of these dots being connected or even of a concerted, coordinated effort to connect them. Each region we asset mapped had dual-enrollment and/or dual-credit offerings in the high schools, but none had high percentages of students or diversity of students participating in these courses. Each of the three had committed partners representing workforce and/or economic development who desired to play an integral role in creating high-quality career pathways in their regions, with most even serving as TNDOE's initial local convening body for the asset-mapping process. The alignment work had to begin by getting all regions into the process, which we have achieved, but it is evident that this achievement serves only as a launch point for the years of work that will be required to build high-quality career pathways statewide.

Additional outcomes that I observed and initially took for granted dealt with regions' baseline understanding of career pathways and the collaborative nature of the work. This work was new to many, and the initial conversations often focused on CTE programming rather than comprehensive vertical pathways. However, after leading an instructional session at the Pathways TN Summit describing the Phase I work I led and sitting with a number of the teams throughout the day, it was clear that this dynamic was shifting. Intermediaries now know the framework components, a good starting point, though most still have considerable distance to full implementation. Likewise, early conversations indicated regional participants expected to collaborate, but many had little experience interacting across the full geographic expanse of the regions. Many outlying

counties are both geographically and economically isolated, positioned some distance from the main thoroughfares (often interstates) that cut directly through the most thriving communities in each region. This finding led the Pathways TN team to shift some effort to helping regions formalize partnerships across counties and municipalities and with postsecondary and industry partners. Many partnerships have been forged over the past year, which again serves as a foundational piece to implementing high-quality pathways throughout a region.

Unfortunately, however, developing a common framework of understanding and formalizing partnerships was as far as we got towards Phase II and III efforts with many regions. Pathways TN has in many ways temporarily stalled its regional work to instead refocus attention on having a coherent statewide plan. This step back, resembling double-loop learning, serves as a good model for the regional intermediaries to view the long-game strategically rather than to constantly plug away at foreground issues. A JFF colleague and I led a daylong session with the state steering committee to create a coherent strategic plan based on evidence from my Phase I research. This informed a three-year strategic action plan (see Appendix Item 8), that both served as a final critical component to Phase II of the NSFY grant and as a unifying vision for Pathways TN's upcoming work. Tennessee was named one of ten states to receive the nearly $6 million in NSFY funding, but this news accompanied some restructuring within the Pathways TN team that has also delayed our progression through Phases II and III.

Tennessee's NSFY strategic plan included a number of early tasks to which I was hoping to contribute, but many of these tasks stalled for a number of reasons. Our co-created year-one regional on-boarding plan stalled in the approval stage awaiting the

Assistant Commissioner's signoff. After waiting nearly two months for approval to continue the work, I learned that the team decided to include the year one on-boarding plan as a piece of a three-year road map for intermediary success. Besides leading a data-driven decision-making session at a regional intermediary retreat, many of the early strategic plan tasks I was scheduled to lead were postponed, some due to red tape, some due to leadership transitions, and others due to intentional double-loop decisions to step back in order to first look at the bigger picture. My primary take-away from these challenges is that state-driven work is often extremely complicated, politically sensitive, and therefore exceedingly slow-paced.

Analysis

Strategic Project

The pace described above does not, in and of itself, indicate dysfunction or undesirable outcomes, but it is a condition that must be considered and calculated into all planning from both external partners and internal staff. Unfortunately, however, this pace is not exclusive to state education agencies, but often exists within individual regions, districts, and schools as well. The actions necessary to transform outcomes for young people are often known in theory, but require significant energy to convince people of the value of changing their actions to successfully implement the actions, as was discussed throughout the RKA. Ultimately, to successfully reach all students with high-quality career pathways, the adult stakeholders must fundamentally change their behaviors, a requirement that too often fails to register. The implications of this failure led me through a majority of my analysis, as I believe it is the primary culprit as to why my project was not entirely successful. It is also likely to blame for Tennessee's limited progress (to this point) rolling-out high-quality career pathways for all students, despite a supportive political environment, aligned state leadership, and relatively sufficient resources, in terms of both funding and programming. It also will bring to light the many implications for this work in my career, for Jobs for the Future, and for the education sector as a whole, which I will discuss in the three subsequent *Implications* sections.

With the advantage of hindsight, it is clear that my Theory of Action could benefit from a thorough re-examination to consider how it could be reframed for purposes of reflective learning and future application. Reflecting back on my original Theory of Action, it hinged on a few subtle assumptions that I either failed to recognize or took for granted in the initial stages of my project. For starters, it assumed that Pathways TN

would continue operating consistently and autonomously, under the direction of the leadership who was in place when I began working with them in the late Spring of 2016. Next, it assumed that I would have unfettered access to regions, their people, and their data in order to customize, create, and test the viability of the diagnostic tools used to establish baseline capacity. A final assumption was that the intermediaries were in place, or would be created along the way for the three recently mapped regions, and functioning at a high enough level to begin to think of themselves as learning organizations, capable of altering their growth and improvement processes. These false or misguided assumptions and the resulting implications explain much of why my project was not as successful as I had initially intended. Much of my RKA research revealed strategies for capacity building that would require time, access, and trust, and these three became elusive as I transitioned from Phase I into Phases II and III.

As I conceptualized this project several months into my residency, I took for granted leadership stability, not fully realizing the dynamic nature of program leadership and transition at the state level. When I began working with Pathways TN in the late Spring of 2016, the organization's Director had been in place for several years and had a good grasp of the landscape of the state and the necessary work to expand career pathways statewide. The Assistant Commissioner over Pathways TN was heavily involved in most publicly visible decisions the organization made, but allowed the Director the space and autonomy to conduct the day-to-day affairs and interactions with regional partners. Likewise, because Tennessee was one of the PtoP Network's first states, JFF had a strong and trusted relationship with the Pathways TN team which made it an ideal location to situate my project. Along with the many previously mentioned

programmatic strengths of Pathways TN, the cohesive relationship the PtoP team had with the Pathways TN team made for a promising start to the project.

However, as I transitioned from Phase I to Phases II and III of the project, Pathways TN's leadership structure changed substantially, creating some additional hurdles to both the timeline and the expectations surrounding my project's work. New executive leadership was installed as part of the Assistant Commissioner's desire to strengthen the program statewide and create a more coherent statewide plan. Pathway's TN's new Executive Director would bring some new procedural norms to how work is facilitated, communicated, and planned. Additionally, in order to ensure excellence in the work that was emerging from the Pathways TN office, the Assistant Commissioner began taking a much more hands-on approach to screening the short and long-term plans and products we would collaboratively produce. As previously mentioned, this created delays in how quickly the work proceeded. I did not anticipate or account for the leadership changes that Pathways TN experienced during my strategic project timeframe, and by failing to do so it had major implications for the speed and amount of Phase II and III outcomes I achieved.

My second false assumption, regarding regional access, caught me by surprise and also negatively impacted my strategic project's execution. Although I was usually accompanied by a Pathways TN staff member throughout my Phase I information gathering, I had a great deal of autonomy to steer those conversations in the direction I felt they needed to go. I also developed relationships with the stakeholders I interacted with, and I was confident that I could leverage them in order to execute Phases II and III. With these relationships and my completed work in mind, I did not fully consider the

implications around access when establishing my theory of action. My initial two "if statements" were both contingent on having the continued unfettered access to regional intermediaries, in order to first diagnose their current capacity then transition to co-create customized growth and development plans with their input. Likewise, meeting regional intermediaries in their greatest areas of need would require a level of vulnerability and access that I no longer had after Phase I.

In fact, following the restructuring, Pathways TN requested that all communications (including surveys, interview requests, etc.) be filtered through their office. This greatly reduced both the speed and the depth and quality of the diagnostic and capacity-building tools I created. Because Pathways TN is building toward statewide coherence and they have a number of incentives they offer their regions, they leverage these with regions to simultaneously place a cycle of expectations and required outputs on them. Because Pathways TN is housed under the TNDOE, they are linked to the state's primary evaluation team, which holds all school districts, a primary regional pathways stakeholder, accountable according to the state accountability plan. This has the potential to create tension and even a chasm between Pathways TN and their regional intermediary partners if not carefully managed, so this dynamic further complicated my efforts to pry into the inner workings of each region. Whereas Pathways TN used our JFF team to provide cover for painting a realistic, and at times disheartening, picture of each region's progress during asset mapping, this new dynamic worked in the opposite way. Rather than encouraging me to ask the tough questions from a third party, outside perspective, often times these questions were left out of the focus groups or surveys altogether. As Pathways TN became the pass through for all communications, I lost the

ability to ask weighty questions that would push stakeholders towards a productive level of vulnerability. Indeed, the access that I was once granted, when stripped away, proved to be a significant barrier to the final two phases of my strategic project.

My third misguided assumption was that the intermediaries were in place or would soon be created, and high functioning, in order to engage at a depth of thought around how they need to learn and change in order to be successful. In reality, only three of the nine multi-county regions were at a point that Pathways TN was willing to engage them at a level of depth anywhere close to where I was hoping to take them for my strategic project. Additionally, Rutherford County, a stand-out county in terms of career pathways progress, also had the infrastructure and support for Pathways TN to include them in this higher level work. Even amongst these four intermediaries, however, I discovered that they were in four positions that differed significantly and had contrasting levels of engagement among their stakeholders. This was not a surprise, and in fact is exactly what I was expecting, and why I sought to create customized plans to meet each intermediary at its place of need. However, the prior two assumptions interfered in this work as well, limiting my autonomy and access to engage these partners in depth to develop individualized plans. I needed time and space to sit with each of these intermediaries to develop a feasible plan based on the information I gathered in Phase I, but to this point I have only been able to work with them as a cluster of regions, focusing on data-driven decision making, a clear need for all four intermediaries.

The other six regions too are in a variety of stages of progress as well, but the Pathways TN team has decided to take a more coherent approach to developing their capacity, rather than beginning with individualized plans. Though intermediary on-

boarding guide is in development, but the aforementioned delay to tie it to a three-year plan is problematic. While I commend the idealism behind the effort to outline a longer-term plan to guide intermediaries to and through their third year with a backwards-mapped approach, in the meantime, a number of regions are at a stalemate of how to proceed with establishing their intermediaries. Despite observing substantial career pathways enthusiasm in the newly-mapped regions while there over the summer, I fear there exists a real danger for that energy to dissipate as stakeholders get further out from the asset-mapping reports having little to show as a follow-up. In the past, the reports have had the effect of igniting action to leverage strengths and resources highlighted within and served to provide momentum to move local stakeholders forward, but to this point I have not seen a similar reaction to these last three reports. In the past, the asset-mapping reports have been published along with an in person presentation from PtoP staff, but again speaking to the access issue, Pathways TN has not requested this follow-up to the recent reports. Although this is still within the realm of possibility and could still take place, I have not had a conversation showing a similar interest from the Pathways TN team. In reflecting through this writing, I now realize I have some agency in this and could be an advocate for pushing these presentations to take place. This, of course, is only one small deliverable among many that could provide momentum to help push the less mature regions forward.

Another challenging dynamic complicating my project is how the new leadership direction at Pathways TN has changed the nature, quality, and productivity of interactions with me and with others who work with Tennessee from our PtoP team. In the past, we have served as valued thought partners, collectively brainstorming and problem-solving

challenges and complications the Pathways TN team was encountering in the work. More recent conversations focused on reporting out on facts, deliverables, and outcomes rather than engaging in discussion about how to support and develop the work. We have also observed a steep learning curve dealing with both Pathways TN leadership's knowledge acquisition of career pathways content and how to best utilize our team to help move the work forward. I believe the change in structure and personnel will ultimately benefit the Pathways TN team and the roll-out of the statewide work long term, but due to the timing of the changes and the inherent shifts in how we work with the team, it has caused new challenges and lengthy delays in my strategic project.

Pathways TN's Progress

Throughout my project I have generated an abundance of new data on career pathways in Tennessee. I believe shifting to a more in-depth analysis of Pathways TN's statewide progress to date could help impact how my project, and the work in general, evolves going forward. Deborah Jewell-Sherman's *Demography Isn't Destiny* (DID) *Framework* (Peterkin, R., Jewell-Sherman, D., Kelley, L., & Boozer, L., 2011) serves as the best lens to view the revelations from my project and from much of the career pathways work I observed in Tennessee. Jewell-Sherman's framework highlights a series of five leadership gaps that must be dealt with to ensure a child's demographic identity is not the primary determinant of his/her ultimate educational success or failure in this country. Although a focal point for JFF, my project, and even the NSFY grant Pathways TN received, equity analysis and resulting action has been glaringly absent from much of the career pathways work in Tennessee. This failure to view the current state of pathways through an equity lens has no doubt been a precursor to the inequitable

outcomes revealed in the NSFY Data Analysis report. The DID Framework helps account for this while also providing some helpful considerations for moving the work forward, which you will also read about in the implications section. The three leadership gaps most relevant to my analysis are the Belief Gap, the Opportunity and Capacity Gap, and the Outcome and Accountability Gap. Along with shedding light on equity in Tennessee career pathways, I will also consider the specific leadership and organizational actions and decisions that have impacted our work through the DID lens.

The Belief Gap focuses attention on the system level leaders and the values they hold for their organization and all of its stakeholders. It also highlights the critical importance of communicating these values to the various stakeholders in ways that help them resonate. Although the DID Framework itself does not explicitly rank the 5 Gaps in order of importance, the Belief Gap is listed first and will also serve as the first consideration for purposes of this analysis. The Belief Gap raises the following questions which are directly relevant to my work: 1) What do systems leaders value? 2) What do leaders believe about the organization's and stakeholders' ability to learn and develop towards improvement? The framework can be used by individuals looking within or reflecting on their own organizations and situations or by outsiders considering circumstances with other organizations. In this case, I will analyze them using both an internal reflection and an outward application to what I have gathered and observed in Tennessee through my strategic project.

As I reflect on the Belief Gap questions in light of my project, there are clear discrepancies between my prioritized values in this work and those I observed from the Pathways TN team and individual regions. I tend to value equity first and foremost, and

initially proposed to execute the majority of my deliverables in light of an equity focus. This aligns well with the PtoP team and JFF organization-wide, prioritizing an equity-based approach with all the work they tackle. I stressed an equity-perspective to the work in my early conversations with Pathways TN leadership and TNDOE leadership, a strategy that was positively received with feedback that seemed to indicate internal agreement. However, specific outcomes from the NSFY Data Analysis report and subsequent discussions and presentations from the Pathways TN team instead indicate that equity is *a* priority, but not *the* priority. This is most apparent from the process graphic below that I created at the behest of the Pathways TN team to reinforce their theory of action for the progression of regional career pathways. They described this process in the Guiding Questions for Strategic Planning document (Appendix Item 9) and appreciated the visual representation I made for them (Figure 11).

Figure 11: Pathways Development Priorities

Interpreting this graphic in terms of values, I derive that Pathways TN prioritizes Alignment among programs, course offerings, and partnerships above all else. Quality and Depth come next, followed by Scope and Scale, which speak to regional expansion.

Equity emerges as the fourth and final stage of progression as regions build out their career pathways. While first discussing the implications of this progression, I argued, to no avail with the Pathways TN team, that equity should either be a foundational piece supporting all the others or it be prioritized from the onset. Ferguson (2017) further pushed my thinking, insisting that equity must be intrinsic within the agreements that all stakeholders are aligning to from the beginning, which would allow for the first three progressions to remain in place.

As is, however, equity will be forever placed on the backburner if not viewed as either a pre-requisite to all subsequent work or as a foundational piece undergirding all aspects of the work. I believe this to be true because of the slow pace with which regions are currently progressing through the stages. While laboring through the alignment, quality, and expansion stages, regions failing to prioritize equity may never reach this stage. Similar to how the game of golf can never be mastered, there will always be room to align partners more closely or improve upon program quality. Though the state has reduced some gaps, my skepticism is reinforced by evidence from the Data Analysis report. For instance, African-American students' access to high-quality pathways statewide is more than twenty percentage points below all other racial demographic student populations. Likewise, economically disadvantaged students trail their more affluent peers by ten percentage points on the same metric. In a similar vein, when compared to Caucasian students across the state, African American students are two times less likely to complete a high-quality pathway and four times less likely to attain early postsecondary credits, along with their Native American and Latino peers who also trail well behind their Caucasian peers. Another troubling statistic drawn from the report

is that despite three year improvements in almost every category measured, African American seamless enrollment into postsecondary programs have dropped each of the last three years. This is especially worrisome because the lowest and most recently measured class of students (freshman cohort of 2011, or graduating class of 2015) was also the first to access the Tennessee Promise "last dollar" scholarship. Every other racial subgroup improved seamless enrollment rates other than African Americans.

In terms of equity-focused capacity-building, I found that some of my efforts to focus attention towards this topic with regional intermediaries were thwarted. Though I believe equity should be front and center in any and all of the conversations we have with regional intermediaries, the term "equity" itself was deemed too taboo to use with certain audiences. The Pathways TN team instead chose to use language about "all students." This is problematic because the term serves as an easy out for stakeholders to use without having to engage in more difficult conversations naming subgroups and discussing what it truly means to equitably serve all students. I believe there are many challenging conversations regional intermediaries must still have when considering the realities of their student data as disaggregated by subgroups, and although I offered to be a part of leading some of these, I have yet to be taken up on the offer.

The Opportunity and Capacity Gap focuses attention around the inherent misalignment that organizations create between espoused and enacted policies, strategies, and actions. The nature of educational equity work is so nuanced that oftentimes legislators and policymakers create tension between the spirit of the policy and the design of the policy, inevitably opening a space for practitioners charged with implementing the policy to stray from its original intention. The Tennessee Promise legislation is a shining

example of this disconnect. Although created with equity in mind to help make college more affordable for all students, in reality, it could quite possibly hinder the chances of the most economically disadvantaged students. Though Tennessee Promise scholarship is designed to fully cover the first two years of tuition at a state postsecondary institution (primarily community colleges), students of lower economic means typically already had this cost covered fully via federal Pell Grants. We know that tuition only partially captures the real economic and opportunity costs of attending a postsecondary institution, so Tennessee Promise's resulting enactment may actually decrease the available public resources to help low-income students with peripheral costs such as transportation, textbooks, room and board. This does not even take into account other realistic obstacles to attaining a postsecondary degree, such as childcare needs or being a family's sole breadwinner. Though we do not have enough evidence to know how this policy will realistically play out in the long term, a policy such as Tennessee Promise, which JFF has even frequently commended, could potentially serve to expand inequity in a state that desperately needs to level the field.

Likewise, Tennessee policies surrounding dual-enrollment and dual credit were designed to enable more students statewide to access postsecondary programming in high school, but the reality is that the percentage of students as a whole and students from marginalized subgroups are still startlingly low. Although the hope behind providing additional funding was to expand the number and diversity of students taking courses in more career-focused subjects, the large majority of early postsecondary credits earned are still in undergraduate prerequisite courses, which means they are being taken by students who are likely already on the four-year college track. Four-year university attendance is

by no means a negative, but the implication of this is that the funds envisioned to target students who may not have had postsecondary aspirations are likely just fast-tracking students who would have graduated college regardless, thus having little impact on *Drive to 55*. In Alabama, however, a bill was passed to add $10 million in early postsecondary access scholarship for high schoolers, but they thoughtfully added a measure that required all students using the funds to take prerequisite courses to mandatorily take a career-focused course as well. However, students who sought only career-focused courses could take as many as they wanted without having to take a pre-requisite academic course, thus creating a dynamic that encouraged less early postsecondary just to get a jump start on a four-year degree and more on taking courses that would lead to a career-focused diploma for students who may otherwise have foregone postsecondary altogether. The nuance required to design policy in this manner is often missing from legislative bodies, but the alignment that is created between espoused and enacted policies, at all levels, is something systems leaders must wholeheartedly seek.

Finally, Jewell-Sherman's Outcome and Accountability Gap looks at the leadership role of engaging internal and external stakeholders towards improving, measuring, and reaching desired outcomes. This gap encourages leaders to create shared ownership and responsibility and raises relevant points about building bridges between the education organization and the external constituency. It also incentivizes stakeholders to embrace change to improve towards desired outcomes.

Relating this gap to what I thus far observed in Tennessee, though the private sector is motivated to change their level of engagement, there has been little incentive for the educators involved in pathways to change their behaviors in order to change

outcomes. Most of the willingness to change emerges from the private sector stakeholders, many of whom, at least in Tennessee are doing so out of necessity to fill critical skills gaps and remain competitive in the global market. The PtoP team believes this is important for at least two reasons. First, employers who engage out of necessity rather than altruism typically engage at a deeper level and the engagement does not fizzle to the degree charitable engagement does in times of economic downturn. Secondly, this necessity is driving engagement across lines of collaboration the private sector is typically unwilling to cross. Because of the cultural differences between the education and private sectors, employers typically send money across the bridge rather than span it themselves. This often ends with employer complaints about the subpar workforce the education sector sends them, highlighting the low return-on-investment corporate giving usually results in. However, in Tennessee I witnessed a large number of employers stepping up to partner with educational institutions, both K-12 and postsecondary, to help support, collaborate, and develop their own talent pipeline. This bridge-building creates the most ideal level of engagement for all stakeholders.

Absent these bridges, there is scarce movement to innovate towards different results, because public educators have a near monopoly on the customers they serve (students) and the product they should deliver (educated citizens). The lone external pressure to excel typically comes from the state's accountability system. However, Tennessee's accountability metrics primarily measure academic outcomes, such as test scores and graduation rates, leaving little room for educators to shift their attention to career-focused outcomes, which play no role (in the accountability system's eyes) in who keeps their jobs or receives a raise. Although there are some hopeful signs for change

emerging from the fifth indicator required by the newly passed Every Student Succeeds Act (ESSA), to this point most state accountability systems have stifled innovation, Tennessee's included.

My three misguided assumptions, along with the three gaps from the DID framework, largely explain the successes and shortcomings of much of my strategic project. More importantly, they inform how I must continue pushing the work forward with Pathways TN, the PtoP Network, and JFF until my residency ends. My findings also have implications for the education sector as a whole and how it must incorporate and support high-quality career pathways. Finally, though I sought to push the thinking of our many pathways partners in Tennessee, I now know my thinking has been pushed the most. As a result, I am now wrestling with a number of "what if's" and resulting implications for potential next steps in my career.

Implications for Self

I recently heard a JFF colleague remark, "We think about the work day and night, then go explain it over the course of an hour and expect them to 'get it.'" This struck a chord with me, especially in considering both the positive outcomes and the disappointments from the residency work I have been performing. To begin, the surface logic behind the pathways model seems to make perfect sense. With middle skill jobs available, America's middle class shrinking, attention spans dwindling, college tuition skyrocketing, and student debt steering young people away from college, why would we not want to fast-track young people with the necessary tools to land livable-wage paying jobs with an upward trajectory? Others easily bought into this logic as well, at least agreeing at the theoretical level. Throughout the year, I often found myself before an

eager, engaged audience on the edge of their seats to hear about this new model for education. Many I have worked with look at high-quality career pathways as a real innovation in education, though this depends wholly on how it is implemented.

In reality, much of the work being done on the ground does not appear to take such radical strides. The more likely source of innovation, I have come to believe, is found in stakeholder collaboration, a rarity in education and the public sector in general. Likewise, in the U.S., private sector competitors rarely meld efforts to support initiatives. The jury is out on whether this dearth of collaboration is because of an American culture of competitiveness, professional isolation, time and resource constraints, or simply a lack of know-how. It is most likely a combination of all of these reasons, but regardless of causation, it cannot be used as an excuse. I have realized I must learn to tell the pathways story in a compelling manner that is powerful enough, and honest enough, to drive people to be different. I also need to learn much more about systems change in order to help create structures that allow us to answer this critical question: How do we allow teams of people the time and space to chew on the work (and the pre-requisite learning) at a comfortable pace without neglecting the youth who desperately need far better outcomes now?

I believe one answer to this lies in the *greenfield* concept described by Rick Hess in *Education Unbound* (2010) as "scrubbing away our assumptions about districts, schoolhouses, teacher training, and other familiar arrangements so that we might use resources, talent, and technology to support teaching and learning in a smarter, better ways" (p. 1). Although I believe this has great bearing on the sector as a whole, I would like to discuss it here because of its more immediate implications for my future. Though

not as simple as the argument is often presented, many scholars (Robinson, Agarwal, Jacobs, et al) propose that the original primary purpose of the public school system was to provide a somewhat educated/skilled workforce to meet the needs of the Industrial Revolution. In *Schooling America* (2005), Patricia Graham recounts the unfolding of our current system and shows how schooling delivery and pedagogy has narrowly changed, relative to other aspects of society, over the past 200 years. There have been shifts such as technology-integration and smaller classroom sizes, but the majority of these changes took place within the bounds of traditional schooling, most notably within the walls of traditional school buildings.

I recently realized I have grown increasingly impatient with the incremental reform efforts of the last 25 years, where policymakers and educators often take two or three steps forward simply to take one or two back with the next wave of political leadership. Greenfielding in education provides the space and autonomy to authentically innovate and challenge the status quo in ways it has previously gone unchallenged. Early thinking around charter schools set out to provide this type of space, but reflecting on my seven years in New Orleans having run an autonomous PreK-8 grade college-preparatory charter school, I believe we did more perpetuating of the status quo than challenging it. Too many boundaries and barriers, whether composed in policy or paradigms, hindered us from developing a bold new vision of possibility with impoverished minority communities. As Ted Kolderie (2015), an early charter school advocate, surmises, it's incorrect to assume public education can improve without being dramatically different.

Given the current state of education, greenfielding seems possible through at least two potential avenues: private schools and split screens. Though I have always been

dubious about the accessibility of private schools and the replicability of micro-schools, I now see the combination of the two as a high-potential vehicle for greenfielding in education. Private micro-schools can be established in ways to limit the risk and exposure to the students that can least or most afford those risks, while also creating fertile ground for out-of-the-box innovation through a nimble organizational structure. Kolderie (2015) advocates for split-screens, describing them as public education systems that strive towards improvement on one hand while creating the right conditions for schools and educators to be genuinely innovative (and even experimental) on the other. Although many public educators are disgruntled, their practices are mildly effective, and most public school systems are viewed as being dysfunctional, they remain that way because no clear vision for transforming them has emerged. Realistically, however, having worked both within and outside of public school systems at all levels, I cannot advocate razing it and starting over, as some would propose. Nevertheless, I suffer no illusion that they will radically shift in the way children, families, and communities need them to without first seeing a viable path to this unknown destination. With this in mind, I believe greenfielding can be the exploration ground to boldly ideate, propose, plan, prototype, and implement new practices in education that could provide a new vision of what is possible beyond the known.

This clarity, along with aspects of my slow-paced, systems-level residency work, have led me to reconsider some of my previously held mindsets around school-startups, private schools, and micro-schools. I never thought I would want to found another school. I was convinced school start-ups are too much work with too little pay-off, leading to too many burnt out, overwhelmed (former) educators. My thinking was

inherently flawed, because the school start-ups I envisioned would only be incrementally different, striving to do what other schools do nationwide, just with better execution. Often in the education world, better execution amounts to longer hours. I now know that although the workload of starting any new enterprise is significant, there are a number of leadership strategies and systems I can put in place to spread and balance the work. Spreading the load also draws partners and stakeholders into the work, spawning deeper levels of commitment, engagement, and ownership. In fact, I now believe the most equitable leadership role I can take is to empower and equip existing community members to lead the work. Additionally, if we collectively dream bigger and bolder and start a school that is markedly different from anything that has previously been done, it is possible that we stumble upon efficiencies and new strategies to lessen the effort required to educate our highest need students, resulting in a more stable and satisfied educational workforce.

My reluctance with private schools stemmed from my belief that they inequitably serve students who are already emerging from a place of privilege, in that their families have the ability to choose schools while their less affluent peers are typically forced to attend their local public school. I now know that I could create a private school targeting the most amazing and highest need students, an even more plausible prospect, especially in the South, in light of the new administration's views towards school choice. Vouchers, tax credit scholarships, and educational savings accounts are all funding vehicles I can leverage for just and equitable purposes. Although private schools certainly have minimum bars of governance, safety, and competence to pass, they still provide the greatest amount of liberating autonomy to greenfield towards innovative outcomes.

Finally, throughout my career I have sought to positively impact greater numbers of children, families, and communities, and the concept of micro-schools seemed to be in stark contrast to my desire for system's level reform. A micro-school may be an exceptional option for the 20-80 students that attend it, but with nearly 60 million school-aged children in our country, I thought, they will never be a tool for reaching the masses. I used to see the small numbers from a deficit perspective, but I now know the small numbers are exactly what is needed to create a more nimble, adaptive learning model with no preconceptions of what school should be. With any new enterprise, risks are involved. Though my time in New Orleans taught me it is more palatable to experiment with learning practices when the starting point is deplorable (i.e. post-Katrina New Orleans), it is far more ideal to take a big bet educating a small number of children who have willingly and consciously chosen to be there. And if that big bet does pay off in terms of producing radically improved outcomes for a smaller community of learners, it stands to reason that it could ignite something eye-opening for the sector as a whole. The spotlight shone on these innovative outcomes could in turn lead to wide-spread dissatisfaction, the first step in the conceptual change framework. As the greenfielding practices create further dissatisfaction with education's status quo, educators and policymakers are more apt to adopt these practices at scale, trading up from the status quo to the innovation.

Implications for Site

Jobs for the Future, and specifically the Pathways to Prosperity team, whole-heartedly embrace organizational learning as a necessity for continued relevance and success. CEO Maria Flynn recently highlighted how much of the research and practice JFF unveiled for the sector six or seven years ago has now become part of the mainstream lexicon. However, this notion also illustrates the current void left for JFF staff to fill, pioneering new ideas that will lead the next iteration of school-to-career work. As a result, the organization has recently implemented a Research and Design program that earmarks significant funds for individuals to work in cross-cluster teams to discover and innovate the next phase of initiatives towards building a stronger national education and workforce delivery model.

This level of commitment to learning is critical for both JFF and partners like Pathways TN to successfully achieve their goals, but it likewise reveals our partners' realities which must be navigated in order to successfully meet their needs. A culture of organizational learning is not contagious, nor is it easily spread across organizations with different governance structures and functions. Additionally, because so much of this work is tackled with extreme urgency, many organizations will not prioritize the time or patience to systemically analyze their context, collaboratively envision an aspirational path forward, and meticulously plan for out the implementation of that vision. Finally, systems change changes people, a truth we are starting to realize though not necessarily fully equipped to operationalize. These realities, in light of JFF's proclivity for learning, have led to further understandings and implications about the work in which we engage.

Though JFF is internally structured to constantly collaborate and learn as an organization, the majority of our partners, especially on the education side and public

sector side, are not. The school systems and state agencies we partner with do many things exceptionally well, but they are not, and never were, built to be highly adaptive to the changing environment. Many suggest this consistency is a real strength of public sector institutions, that they are built to last. Though this may be so in certain aspects, it also hinders their ability to be nimble and adjust practices to labor market demands and economic shifts, which are constantly evolving. The greatest implication of this for JFF's work is that we must become more adept at creating and structuring learning opportunities for our partners, rather than handing the learning off to them. Though ownership and responsibility are two of the surest ways to build buy-in, charging an organization with learning that is ill-structured to effectively learn is a sure way to fail or fall short. Just as a teacher finds success with her students by gradually releasing them to do more of the work, JFF must develop greater capacity to handle more of the load early on, and only as the partnering organization develops their own capacities to organize for learning, do we hand off the responsibility to lead the learning internally. JFF has a wealth of knowledge and practice in how to lead organizational learning internally, but only through thoughtful and deliberate modeling, coaching, and unveiling of these practices will we adequately prepare our partners to lead their own long-term learning.

It is apparent that JFF must at times prepare others with the systems, structures, and processes to eventually lead their own learning, but alternatively, we have had a recent influx of partners asking us to essentially do the learning for them. Though this is less than ideal in many respects, the requests emerge from a laudable position: in primarily serving low-income minority youth with few reliable alternatives leading to life-long learning and financial stability, many partnering organizations are prioritizing

execution over learning in the interest of time. Considering evidence from decades of failure to equip marginalized youth with either an adequate education to seamlessly matriculate to postsecondary education or the industry-recognized skills and credentials to transition from high school into family-sustaining work, these organizations are left with few placeholder alternatives in the present. The *Shellshocked* documentary, capturing the despair of New Orleans youth and gun violence, signals that the more likely scenario for underprepared youth is either the school-to-prison transition or school-to-grave for those even less fortunate. In light of this reality, it is incumbent on JFF to go above and beyond our traditional means of technical assistance and facilitated learning. These partners have specifically asked for turnkey deliverables, toolkits, and guides to execute on the work more efficiently using both research and practice-proven techniques. The positive of this is that our partners recognize our legitimacy in the field and the wealth of knowledge that we have built along the way helping numerous states and regions effectively navigate the work. They are now simply asking us to package that knowledge in a way that allows for flexibility, as discussed in sector implications, but jumpstarts their work rather than recreating the wheel. In many ways, this method of acting first and learning along the way is exactly what Edmondson speaks of in terms of learning as execution, assuming partners are analyzing and reflecting upon actions along the way rather than blind implementation.

In many ways, the term "systems change changes people" is similar to "if you build it, they will come." The career pathways channels we are ultimately trying to help create are not well-suited as minor adjustments to historical practice, rather radically new ways of structuring learning paths with cross-sector partnerships. On the surface, many

of the necessary changes appear to be technical changes, such as shifting learning from high school classrooms to postsecondary classrooms and the workplace. However, the adaptive change required to shift the hearts and minds (of all stakeholders) towards this new educational model is much more difficult than simply implementing the technical change. However, the premise of systems change leading to changed people indicates that often times doing the work, radically changing the systems, and creating positive results can do the job of changing people's hearts and minds for us. Likewise, one of the key tenets of Barber's *Deliverology* (2016) methodology is to "create an irreversible delivery culture" in which stakeholders know the system is here to last. Much research has been done on educators' attitudes towards short-lived reform efforts. Many simply hope to ride out the current flavor of the month reform being pushed by a leader who likely will not be around three years from now until the next arrives. However, much of the weight of these changing pathways systems is centered on leadership outside of school districts and political offices. Locating these new systems amongst employers and postsecondary institutions creates a much stronger foundation for longevity, one that can more easily be recognized as more of an irreversible cultural shift than a potentially short-lived system-tweak. For educators, the process of navigating the new system in collaboration with young people and new players (employers, labor and workforce delivery, etc.) and seeing the positive outcomes inevitably builds a degree of ownership over the new system results from changed mindsets.

Implications for Sector

Career pathways are a rather unique phenomenon in education reform, because at the same time that they are an increasingly burgeoning movement, they have also been

around (by different names) for centuries. Unfortunately, in the U.S., however, our ability to provide strong and equitable high-quality career pathways has ebbed and flowed, with private and public sector resources and policies serving as a major impetus to these fluctuations. Pathways intermediaries then must serve as the stabilizing force to keep continued focus, resources, and attention on this growing movement by aligning vision, language, and practice; navigating the tension amongst coherence and flexibility; and expanding programming equitably despite the inherent challenges of scalability.

In many ways, the heart of career pathways is about learning from those who learned before you, and cross-sector intermediaries are the most promising convener to make this happen for youth. By engaging both trained educators and industry professionals and experts in their respective fields in a student's learning process, rather than solely a classroom teacher who may never have had exposure to the world of work and occupations in which the large majority of students will soon find themselves, learning becomes more authentic, relevant, and therefore, engaging. In *Shellshocked,* one father who lost his son to gun violence and now fills the void through community advocacy says, "A kid can't be what a kid can't see." This implies that young people need role models, people who look like them or share similar backgrounds, who are working in fields that interest them. Running my school in New Orleans, I always believed that once children find something that they both like and that they are good at, it is an encouraging formula for success. I have come to refine that thinking to now see that those two alone are not enough. Students also need someone else, be it a mentor, a coach, or a community member, who can help show them the path and share the knowledge and expertise required to stay on that path to achieve their desired future

outcomes. Whether through apprenticeship learning, internships, job shadowing, or preferably all of the above and more rolled out in a thoughtful and orderly work-based learning continuum, students need a much deeper exposure to the work and occupations they will one day fill, if they are to effectively fill these roles. Likewise, they also need to see explicit connections from the academics they are learning to the skills necessary to be a successful employee in their occupations they pursue.

There is a certain level of uniformity in education reform initiatives that must be harnessed to take efforts from pilots or programs to scalable movements. For starters, with any "new" reform movement, terminology and semantics matter. With career pathways specifically, the words intermediaries use and share with pathways stakeholders carry significance because we are still battling the stigma and inequity of the past, the vocational education movement, where tracking and student steering based on race, gender, socio-economic status, and grades were commonplace. Although vocational education and training on the surface still perfectly describes this work and is still used in many countries, it has largely been replaced by "career and technical education," or more preferably, career-focused education.

While leaving behind the inequity of the past, these new terms also signal a shift from the typically blue-collar trades alone to more highly technical programs of study leading to skillful occupations. This aligns with estimates of the abundance of future jobs that will require technical skills beyond those implicit in a high school diploma. Common terminology also helps overcome the previously mentioned cross-sector communication gap, by providing a new language all have access to and agree to. Lastly, language matters because this is a movement that must be embraced by all, as all children

need more exposure to the world of work. As Bob Schwartz has often written, career education is often considered a wonderful thing for other people's kids, but parents and policymakers must be persuaded that it is in fact the most promising option for most young people, in order to make career-focused education mainstream. This will only happen with common and consistent messaging, which must utilize common terminology to lessen the confusion and allow for faster adoption.

Building on the language issue, intermediaries must also norm on what is meant by each glossary term and how the envision it unfolding amongst schools and employers. A healthy tension exists between uniformity through prescriptive programming and the flexibility that allows regional economic labor sheds to adapt programming to meet their specific context and needs. Our asset-mapping work highlights how unique each region's set of opportunities, challenges, and possibilities are. As a result, pathways work must allow for adaptation and evolution from current practice, but there are a number of non-negotiables that must remain constant, with equity being at the forefront. Regional intermediaries must build visions together, as the collective impact framework encourages, and these visions must find the right balance of uniformity and adjustment. As these visions are converted to actions, they must be implemented with fidelity to both the spirit and the language of the vision to ensure programs are aligned for positive outcomes. Additionally, leadership coherence and continuity is absolutely critical to fully realizing high-quality career pathways, as implementation is a multi-year or even decade-long process, rather than a quick conversion.

Because this most recent emergence of career pathways is still relatively fresh out of the gates, much remains to be seen in the education sector's ability to convert

promising practice to scale. Unfortunately, there is no certainty that successful pilots, the primary model for initial career pathways implementation, can or will be successfully scaled to reach all students. We are no doubt witnessing pockets of excellence and exemplar pathways programs across the country, but there are few examples of states or even regions that are effectively providing all students with authentic access to high-quality career pathways. In Tennessee, for example, despite the friendly pathways political and policy environment allowing for the existence of virtual academies, virtual internships, and publicly funded early college and dual enrollment/credit, the pragmatism required for students to actually matriculate to each step of a designated pathway is either too cumbersome or ambiguous for many to grasp. Successful postsecondary partnership pilots and work-based learning partnerships are not always scalable to the outer communities of a region because of geographic and transportation barriers that restrict many low-income students from accessing this quality programming. Even as Tennessee became the first state to offer universal last-dollar scholarships for the first two years of postsecondary, young parents and low-income students still find it impossible to sustain a household while attending school full-time. In some cases, pilots should be looked to more for learning and innovation than for expansion or multiplication. Pilots should not be wholly discounted or foregone in favor of only easily scalable activities, but the sector must be clear about the approach, the desired outcomes, and the realistic nature of moving from small-to-big with successful programs.

Conclusion

Though aspects of career-focused education have been in existence for millennia, educators and other career pathways stakeholders nationwide are wrestling with how to

implement high-quality pathways within the constraints of their regions and their contemporary systems. Work-based learning, learning by doing, and apprenticing are proven methods for effectively engaging young minds and conveying knowledge, but implementing these practices within the bounds of modern public schools is a challenge few have successfully navigated. JFF and the PtoP team have significant experience and expertise in helping systems navigate the challenges and barriers to implementing high-quality pathways. I designed my strategic project to capture some of this knowledge and apply it to regional intermediaries across Tennessee who are struggling through these issues. Over the course of my residency project, I successfully achieved several targets, primarily in Phase I, encountered many challenges that led me to fall short in other ways, primarily in Phases II and III, and have a drawn a number of takeaways that have ongoing implications for this work, not only for Tennessee, JFF, and the education sector, but for my own leadership development as well.

My project's most significant achievements centered around bringing stakeholders and resources under the Pathways TN umbrella during the Phase I, Gathering Information. Despite having been at this work for four years prior to my project's start, Pathways TN and the TNDOE still excluded three large, multi-county regions from the organized efforts. Each region displayed pockets of strength towards creating a cohesive vision of high-quality career pathways, but without the guidance of Pathways TN it was highly unlikely they would be able to link these assets and overcome their challenges in a way that worked for all students in the region. My work to asset map and engage these regions served as a launching point for them to build region-wide, guided pathways. While helping to expand Pathways TN's network statewide, I also

conducted a statewide needs assessment as part of the New Skills for Youth grant, work that led to an additional $2 million in funding for Tennessee's career pathways. This effort also included a data analysis report, which revealed an honest and humbling picture of the extent to which Tennessee must focus their pathways efforts on equity and expansion. Finally, though much of my success in the project was in Phase I, I was able to lead regional capacity-development efforts through workshops and retreat sessions that would help each region develop a deeper understanding and competency for this work.

Access and vulnerability emerged as two key components I overlooked when creating my initial theory of action. These missing components undermined many of my efforts to compose tailor-made capacity-building plans for Pathways TN regions during Phases II and III of my project. By failing to recognize the critical importance of being proximate to regions and their leading stakeholders, I failed to grasp how difficult it would be to gain intimate knowledge of the regions and their internal and external challenges to successfully implementing high-quality pathways. I never fully developed baseline metrics for regions as a capacity-building jumping off point, because I never broke through enough of the glossy outer shell educators often portray to outsiders evaluating their work. Conceptual change requires creating dissatisfaction with the current state of being or thinking, but I never grasped the level of vulnerability and humility required for regions to step back and take an honest look at the data from their existing programs in order to achieve the level of dissatisfaction. On a similar note, as Pathways TN restructured its operations, I lost access and autonomy to continue pushing the work forward at an effective pace. This too greatly limited my ability to achieve many deliverables I set out to produce during Phases II and III of my project.

The implications of my challenges and successes are abounding and will continue influencing my work through the remainder of my residency and beyond. To begin, as long as the work continues to be done within traditional school districts, private industry must drive the work to be innovative and efficient. Although ESSA should help nudge state accountability systems in the right direction, the external pressures on school systems need to be aligned to career-focused outcomes by those with power, money, and influence, typically employers. Equity issues need to remain front and center in the work, either as a prerequisite component or as a foundational component underlying all aspects of the work. We must shift the narrative from speaking about all students to speaking about specific historically marginalized subgroups, because at present, "all students" often overlooks all students.

I must continue making progress on documents such as the intermediary on-boarding toolkit to provide a predictable and coherent path forward for new regions to carry their work forward. Too often, the momentum and enthusiasm observed early on in convening regional stakeholders subsides once they get into the ambiguous stages of strategic planning. Though custom growth and improvement plans are ideal for developing regional capacity, a more generic, turn-key toolkit to help guide regions out of the gates is also necessary. Finally, we must cultivate innovation in career pathways, and this is unlikely to emerge from the education sector as it currently operates. Greenfielding and split screens can help push the needle from outside of the traditional models, hopefully opening influential eyes on the inside along the way.

Career pathways are much more than an educational reform effort and should be considered a path forward for millions of young people in our country, especially those

who typically fall into the category of the "forgotten half." That said, frameworks for high-quality pathways must be followed with fidelity in order to ensure young people and the labor market are getting the most out of their education and skill development courses. My residency at JFF provided me insight that will last throughout my career, and my strategic project successes and failures have revealed actionable implications for how I can move this work forward in Tennessee and beyond. The work is not easy, but it is easily worth the required effort to provide young people from all backgrounds with high-quality pathways forward to the futures they want and deserve.

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Appendix

Appendix Item 1: Asset-Mapping Questions

Introduction

- Host introduces process, welcomes people
- Interviewees introduce themselves, their organizations
- JFF interview lead describes P to P, sets context (state is adding regions or starting their P to P work)
- JFF interviewer reviews interview goals and five levers which structure the interview process

Mapping Purpose (JFF explains)

- Assemble baseline data about the region in relation to the five levers to determine starting point for planning
- While aware of limits of short visit, bring helpful "outsider" look with a national perspective
- Serve as the foundation for the 12 to 18 month work plan to be written by stakeholders
- Help to identify regional leaders with the energy and commitment to make and implement the plans with support of JFF and the regional and state leads.

Outcome: Power point and overview report to jumpstart the planning process

Lever-Specific Questions NOTE: While these questions are organized around employers, intermediaries and education institutions, group interviews often include people across these groups. You should be prepared to abbreviate in each category as well as jump to concluding questions which are about the current opportunities and aspirations in the region for stronger pathways and better economic outcomes and are not lever specific.

QUESTIONS FOR EMPLOYERS in health care, manufacturing, & IT (NY would need questions that go deeper since they've already committed through the PTECH replication RFP. Questions would need to talk about what employers need to do to prepare. We have guidebooks—IBM guide and other sources for this purpose.)

DEMAND: Tell us a little about the state of xx field in this region (prompts: mostly large, small companies; new old; growing, declining; cohesive, fragmented, active sector organization?)
In XX field, what kinds of jobs are open to young workers?

- What are the key education, certification and skills demands for entry level jobs?
- What kind of work experience is required if any?
- What are the career advancement paths for young people?
- How do you find qualified employees?

CURRENT EMPLOYER ENGAGEMENT: A huge challenge in the US is helping young people get work experience. In general, you can't get a job without experience, and you can't get experience without a job. The next set of questions is about how you

interact with the education and training system, if at all. Many companies participate in job fairs, send speakers to schools, and host visits, but we are looking for deeper engagement in preparing and hiring young people in your industry.

What is your impression of the job schools and community colleges are doing to prepare young people for careers (at all, in your field)?

1. Do you interact with schools, community colleges or 4-year colleges in regard to the preparation of your workforce? (If "not at all" move to question # 3) If so, what are the specific issues or problems you raise?
2. What has been your experience with hiring young people (what is working and not working)?
3. What incentivizes and supports have helped you or would help you in the future hire and train young people or take them on as interns or apprentices?
4. Are labor or education policies barriers? If so, which policies are problematic?

OPPORTUNITIES

- If provided with supports, would your company be interested in expanding work-based learning opportunities for young people?
- If so, what would you need to get started and sustain involvement?
- What organizations and business and community leaders could serve as conveners and leaders of employers who want to improve career preparation opportunities for young people?
-

QUESTIONS FOR INTERMEDIARIES NOTE: We use the term intermediary to mean the organizations that link schools, colleges, and employers, serve as aggregators of work based learning opportunities, and reflect the needs of the employer community—both businesses and nonprofits. Such organizations include WIBS, chambers of commerce, community organizations, and foundations.

ECONOMIC DEVELOPMENT: Describe your organization's strategy for supporting economic development and job creation in your community?

- What are your sources of data about demand and supply?
- With what organizations or institutions do you collaborate and on what issues of relevance to the well-being of youth?
- What is your relationship with State Economic Development?

INTERMEDIARY ROLES: How does your organization assist and support educators and employers to work together?

- Who else has the ability to convene employers and educators and assist them to work together? How?
- What barriers have you encountered in helping education and workforce partners to work together in this region?
- What are the specific collaborations you are engaged in with the K-12 and

Community college systems to prepare young people for this region's career opportunities?

EMPLOYER GROUPS AND CHAMPIONS: What employers have played, or could play important roles in building work-based learning and career education?

- What incentives and supports have helped employers engage in youth workforce initiatives?
- What has prevented employers from engaging more fully, and what would help?
- How are employers helping to shape the career pathways that have been used among education and training institutions?

ENVIRONMENTAL AND POLICY FACTORS: What other factors affect the region's capacity to build career oriented education and work-based learning?

- What are the Governor's or other State leaders' priorities related to career education and work-based learning?
- What funding or legislative factors have had an impact on career and work-based

QUESTIONS FOR COMMUNITY COLLEGES Most community colleges don't disaggregate data on students by age so they often don't know how younger students are faring compared with returning adults. So, it's important to clarify that our purpose is to discuss how the community college supports the career development of young people, and especially how they are prepared for careers.

EMPLOYER ENGAGEMENT: How are employers engaged in the college's programs and how are those relationships managed and funded (career office, advisory committee by sector, continuing education outreach etc.)?

- How are regional labor demand data and employer needs being collected and communicated?
- In which fields and in what ways are students getting internships and other work experiences through the college?
- What assistance would be most helpful to you for engaging employers in creating more internship opportunities for all students, but for recent high school graduates particularly?

WORK BASED LEARNING: Which majors or certifications in our areas of interest require or recommend work placements (internships, job shadowing, apprenticeships, mentoring, etc.,)?

- What is working well in this area and what are your biggest challenges?
- Who participates? How do the demographics and outcomes compare for students in technical versus academic pathways?
- What are the main funding streams for work-based learning (Perkins, WIA, Trade Adjustment Assistance TAA, other?)?

COLLABORATION WITH HIGH SCHOOLS:

- How do you collaborate (if at all) with high schools to develop career pathways?

- Are there CTE pathways in which high school and college curriculum is aligned?
- What is working well, and what are opportunities for improvement?

QUESTIONS FOR HIGH SCHOOLS

EXISTING OPPORTUNITIES: What career and technical education is offered in the three sectors of interest? Are CTE and academics integrated in any way?

- What career information and advising do students get, and how/when?
- Who participates? What is the difference in demographics and outcomes for students in CTE versus other pathways?
- Are dual enrollment opportunities available to students to take college level CTE courses? Other dual enrollment opportunities?
- How is dual enrollment funded and supported?
- What work-based learning opportunities do students have (internships, job shadowing, youth apprenticeships, mentor programs, etc.)?

EMPLOYER ENGAGEMENT: How are employers engaged in the schools and finds placements and manages them?

What assistance would be most helpful to you for engaging employers?

PROGRAM CREATION: What are the district's processes for adapting or creating programs?

- What are its organizational, budgetary, and facilities resources and constraints?
- When you need help and support in implementing a new program, where do you turn for support or assistance?

POLITICAL/ENVIRONMENTAL FACTORS: What political dynamics and attitudes in the school board, community and parent groups affect career-oriented education initiatives in this region?

- How are state and federal funding streams affecting career education and work based learning?
- Has your district discussed CTE outcomes alignment with Common Core?
- What perceptions do you and your stakeholders have about the interests of employers in the region's young people? Who has stepped up and in what ways?

Closing / Opportunities

- What is your "wish list" for system and/or institutional changes that would better prepare young people for successful careers in this region? (infrastructure, policies, partnerships, practices, funding, etc.)
- What are the most important needs and opportunities in this region that should be highlighted in our report?
- Is there any question we did not ask that we should have asked?
- What other people and resources should we consult? (interviewees, documents, etc.)

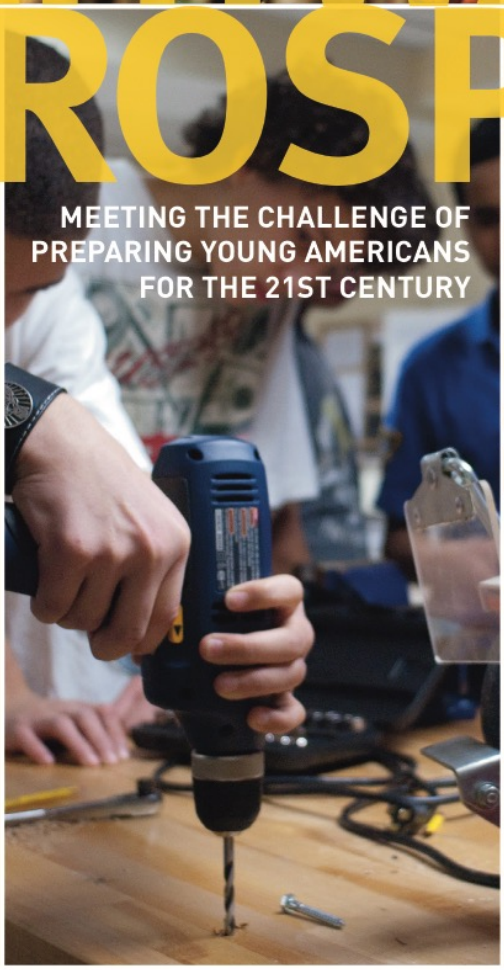
Appendix Item 2: Greater Memphis Asset Map Report

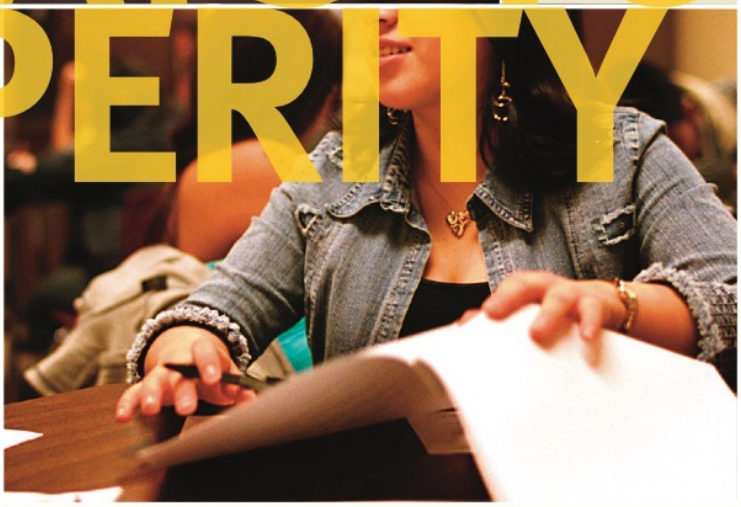
GREATER MEMPHIS ASSET MAPPING PROJECT

A PATHWAYS TO PROSPERITY NETWORK REPORT

PATHWAYS TO PROSPERITY

MEETING THE CHALLENGE OF PREPARING YOUNG AMERICANS FOR THE 21ST CENTURY





PATHWAYS TO PROSPERITY NETWORK

JOBS FOR THE FUTURE

HARVARD GRADUATE SCHOOL OF EDUCATION

SEPTEMBER 2016

JOBS FOR THE FUTURE

Jobs for the Future works with our partners to design and drive adoption of education and career pathways leading from college readiness to career advancement for those struggling to succeed in today's economy.

WWW.JFF.ORG

The Pathways to Prosperity Network—a collaboration of states and regions, Jobs for the Future, and the Harvard Graduate School of Education—seeks to ensure that many more young people complete high school and attain postsecondary credentials with value in the labor market. Each participating state is engaging educators and employers in building a system of grades 9-14 career pathways, combining high school and community college, that launches young people into initial careers while leaving open the prospect of further education.

WWW.PATHWAYSTOPROSPERITY.ORG

ACKNOWLEDGEMENTS

We would like to thank Assistant Commissioner Danielle Mezera, Pathways Tennessee Program Director Nick Hansen, and the Pathways State Planning Team for their leadership of this initiative. We also want to thank Nick Hansen and Ellen Bohle for coordinating the asset mapping process. We especially want to thank everyone who took the time to talk with our JFF/HGSE team. Representatives from the following organizations participated in asset mapping interviews:

- Advance Memphis
- Alliance Services
- Arlington Community Schools
- Benjamin L. Hooks Job Corps Center
- Dyersburg State Community College
- Greater Memphis Alliance for a Competitive Workforce
- Lauderdale County Schools
- Memphis City Government
- Moore Tech
- Nuvasive
- Shelby County Schools
- Southwest Community College
- TCAT- Memphis
- William Moore College of Technology
- Workforce Investment Network (WIN)

INTRODUCTION

Stakeholders in Greater Memphis are working to build grades 7-14 career pathways, aligned with the Pathways Tennessee framework and strategic plan, that support young people in the region in the attainment of their educational and career goals. This asset mapping report provides baseline data that will serve as a foundation for the region's initial planning and design work as part of the Pathways to Prosperity Network. The Pathways to Prosperity team carried out asset mapping work in Greater Memphis in June 2016. This report provides regional labor market information and a preliminary look at the region's many resources for pathways development. It also highlights bright spots throughout the region, recommends focus areas and strategic pathways levers, and concludes with observations about starting points for the next phase of this work.

The Pathways to Prosperity Network—a collaboration of states, Jobs for the Future, and the Harvard Graduate School of Education—seeks to ensure that many more youth complete high school, attain postsecondary credentials with currency in the labor market, and enter into careers, while leaving open the prospect of further education. State and regional stakeholders from across education, business, and government lead the work in each Pathways to Prosperity state, with the long-term goal of creating statewide systems of grades 7-14 career pathways that serve most students. Key sectors for building pathways aligned with labor market demand include STEM fields such as information technology, health care, and advanced manufacturing.

Overall, Greater Memphis is well positioned for success in building grades 7-14 pathways linked to local labor market needs. Many of the key building blocks for pathways are already in place, including cross-sector collaboration and partnerships, supportive state policies, committed employers, career-focused learning and career exploration opportunities for students, and secondary and postsecondary institutions that are working to create programs of study aligned with labor market demand. In addition, community leaders and stakeholders who were interviewed by the asset-mapping team repeatedly voiced tremendous enthusiasm for the work and a willingness to contribute to it. In order to advance the Pathways work across Greater Memphis, stakeholders will need to develop a collaborative approach that enables them to coordinate across the region and ensure that all stakeholders have access to the resources needed to support the work.

Summary of recommendations:

- **Regional Collaboration.** Despite the high poverty levels of many of its residents, the Greater Memphis region is extremely resource-rich with industry, postsecondary institutions, and philanthropic community engagement. Key partners throughout the community must unite with a common vision for Pathways to ensure funds and efforts are directed towards coherent, targeted outcomes.

- **7-14 Pathways.** Memphis and Shelby County Schools suffer from historically stigmatized and now heavily underutilized Career and Technical Education (CTE) programs at the secondary level. These are key structural elements of seamless

pathways. Much stronger connections, innovations, and communication between secondary and postsecondary institutions are needed in order to scale up pathways to serve all students. Stakeholders will also need to address issues from the past, such as student tracking and de facto segregation, in order to shift the narrative of what career-focused Pathways could do for young people and the community.

- **Career Information and Advising.** The Memphis community is hampered by the existence and employer/client reliance on temporary worker services (temp service) as a means to sustained employment. Starting no later than the middles grades, students need equitable access to high-quality, vertically aligned career information and advising in order to make informed choices about their futures and understand the debilitating function of temporary work placement in the community. A next step in the Pathways work should be the creation of systems and partnerships that connect and build on existing activities to develop a sequenced approach to career exploration.

- **Employer Engagement and Work-Based Learning.** The City of Memphis displays its commitment to giving young people meaningful, paid work experience by putting over 1,400 youth to work each summer throughout the community, however these roles are not typically tied to well-developed career pathways that would lead to a clear next step. *Expanding this program and connecting it to clearly defined Pathways should be a top priority.* In order to scale up these opportunities, it will be important to engage additional employers by providing clear entry points and connections to the Pathways work and to ensure that employers have the support that they need to be strong partners, especially small to medium-sized businesses (SMB) who may not have the resources of a FedEx.

- **Intermediaries.** While many strong intermediary organizations, cross-sector collaborations, and over 2,000 nonprofit community-based organizations (CBO) already exist in Greater Memphis, most are very narrowly focused and are not aligned to impact the Greater Memphis region as a whole. An immediate step is to convene a regional steering committee that can coordinate among local organizations in order to scale up pathways across the region. The committee should also consider nominating one key cross-sector intermediary to own responsibility for aligning and driving the regional Pathways work. Finally, creating a full-time Pathways position to coordinate and drive the daily work of the intermediary is essential to successfully expanding regional Pathways.

STRATEGIES NEEDED: THE PATHWAYS POINT OF VIEW

To prepare young people for an ever-changing and increasingly global labor market, and to create a pipeline of skilled workers for key industries and professions, Tennessee's public education institutions—high schools, community colleges, and public universities—must be responsive to employer needs. Employers, too, need to do their part by opening their enterprises to young people and by working closely with educators who design pathways to careers. These collaborations, which require ongoing communication with and feedback from

industry and education partners, will ensure that the skills taught and practiced match the requirements of the labor market. The education system must support young people's exploration of potential career options and provide rigorous, relevant instruction that prepares them for college and careers upon graduating from high school. Students must be able to see the real-world applications of what they do in school in order to set realistic career goals and pursue paths toward those goals. Real-world learning engages students and increases the likelihood of their graduating; students who cannot connect their learning to future job opportunities are less likely to finish their degrees on time or ever.

While schools and postsecondary institutions can offer relevant, rigorous curricula, work-based learning is the most effective way to provide young people with the real-world learning they need to acquire the skills for workforce success. Switzerland, Germany, Austria, the Netherlands, and Australia all have strong CTE systems, intensive work-based learning opportunities, high upper-secondary completion rates (90+ percent), and low youth unemployment (3-6 percent). In 2010, Learning for Jobs, an ambitious study of vocational education in 17 of the 30 OECD nations, concluded that workplaces:

> …provided a good place to learn both hard skills in modern equipment and soft skills in terms of working with people in a real-world context. Workplaces improve transitions from school to work by allowing employers and potential employees to get to know one another, trainees contribute useful work, and workplace training within vocational programs provides a lever to link the mix of vocation provision to employer needs.

With an emphasis on work-based learning, the Pathways to Prosperity framework includes four elements of a grades 7-14 pathways system:

- Employers that are committed to providing learning opportunities at the workplace and supporting the transitions of young people into the labor market

- Career pathways with clear structures, timelines, costs, and requirements linking and integrating high school and community college curricula and aligning both with labor market needs

- An early and sustained career information and advising system strong enough to help students and families make informed choices about education and career paths

- Local or regional intermediary organizations to provide the infrastructure and support for the development of such pathways

A fifth lever must be in place at the state level: a high-visibility stakeholder group representing employers, policymakers, labor, and K-12 and higher education. Its members support the regional work as public spokespeople and champions, ready to develop, promote, and enact policies that enable state systems to support career pathways for high school and postsecondary students.

PATHWAYS TO PROSPERITY FRAMEWORK	
Goal: Grades 9-14 Pathways Linked to Local Labor Market Needs	
To demonstrate in key regional labor markets that many more young people can complete high school, attain a postsecondary credential with currency in that labor market, and get launched into a career while leaving open the prospect of further education	
Levers for Implementation	**What the Work Looks Like**
Career pathways	High schools and community colleges create 9-14 career pathways with clear structures, timelines, costs, and requirements linking and integrating high school and postsecondary curriculum and aligning both with labor market requirements.
Career information and advising system	Starting no later than the middle grades, students are exposed to a wide range of career options, information, and opportunities to learn about high school and postsecondary courses of study leading to careers. Students engage in a 7-14 continuum of work-based learning opportunities in their chosen career areas. Intermediaries, employers, and community-based organizations help young people make informed choices throughout each 7-14 pathway.
Employer engagement	Employers commit to providing a continuum of learning opportunities at the workplace throughout the 7-14 pathway. Employers collaborate with educators and are supported by intermediaries in structuring and managing workplace learning. Employers support students' transitions into the local labor market.
Intermediaries	Local or regional intermediaries serve as conveners, brokers, and technical assistance providers to schools and employers engaged in building and sustaining pathways. Intermediaries recruit business, nonprofit, and public employers and ensure that participating leaders understand and support the vision.
Enabling state policies	State dual enrollment policies provide access for low-income students. Districts and community colleges have financial incentives and sustainable funding to provide 9-14 programs of study in career and technical education and leading to diplomas, certificates, or associate's degrees. Accountability systems weight dual enrollment courses as they weight AP and IB. The state provides incentives for employers and unions to provide work-based learning opportunities.

THE PURPOSE OF ASSET MAPPING

Each new regional engagement in the Pathways to Prosperity states begins with mapping the new region's assets. The purposes of asset mapping are as follows:

- To assemble baseline data about the region in relation to the five levers to determine a starting point for planning
- To bring a helpful "outsider" look to the region from a national perspective during the short visit
- To serve as the foundation for a 12- to 18-month work plan to be collaboratively designed by regional stakeholders
- To help to identify regional leaders with the energy and commitment to make and implement the plan with the support of JFF and regional and state leads

GREATER MEMPHIS OVERVIEW

The Great Memphis Tennessee region comprises 4 counties: Fayette, Lauderdale, Tipton, and Shelby. The total population of the region is 1,063,846, according to the 2014 American Community Survey. Of the 4 counties in the region, Shelby is the most populous, with 936,130 residents, amounting to 88% of the total population of the region. Memphis is the region's largest city. This region has a larger African American population than other regions in Tennessee; about half of the region's residents are African American.

Historically, Greater Memphis has been less wealthy than the state as a whole, with both unemployment and poverty rates that are typically higher than statewide figures. However, following sharp declines in regional unemployment rates and a strong rebound in the manufacturing sector the past several years, Greater Memphis's 3.8% unemployment rate is now lower than that of the state (4.3%), according to April 2016 figures provided by the Tennessee Department of Economic and Community Development. However, poverty rates in the region remain high. According to the 2014 American Community Survey, the poverty rate for the state of Tennessee was 17.8%, while the poverty rate was 21.3% in Shelby County and 26.3% in Lauderdale County. Child poverty rates in both Shelby and Lauderdale Counties are over 30%. Moreover, poverty rates across the region have risen over the past 15 years. (See Table 1.)

Table 1
Demographic and Economic Characteristics of 4 Greater Memphis Counties

		Fayette County	Lauderdale County	Shelby County	Tipton County
Total population		38,664	27,619	936,130	61,433
Children under 18		22%	23%	26%	26%
Racial and ethnic composition	**White**	69.4%	61.7%	40.5%	78.4%
	Black or African American	27.8%	35.1%	52.5%	18.1%
	American Indian and Alaska Native	0.1%	0.4%	0.2%	0.6%
	Asian	0.7%	0.4%	2.5%	0.6%
	Native Hawaiian and Other Pacific Islander	0.0%	0.0%	0.0%	0.6%
	Two or more races	0.8%	1.0%	1.7%	1.5%
	Hispanic or Latino (of any race)	2.4%	2.2%	5.8%	2.4%
With Food Stamp/SNAP benefits in the past 12 months		16%	28.6%	21%	17.4%
Median family income		$65,868	$38,806	$57,175	$61,048
Per capita income		$28,946	$15,715	$25,913	$23,205
Poverty rate		14.5%	26.3%	21.3%	13.1%
Poverty rate as of the 2000 Census		14.3%	19.2%	16%	12.1%
Change in poverty rate from 2000 to 2014		+0.2%	+7.1%	+5.3%	+1%
Child poverty rate		22%	35%	32.5%	16.7%
Unemployment rate in May 2015		6.2%	8.8%	6.7%	7.4%
Unemployment rate in May 2016		4.0%	6.3%	4.4%	4.7%
Over year change in unemployment rate		-2.2%	-2.5%	-2.3%	-2.7%

Sources: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates; U.S. Census Bureau, Census 2000 Summary File 3; U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics

LABOR MARKET OVERVIEW

Data from Economic Modeling Specialists, Inc. (EMSI) and the Bureau of Labor Statistics (BLS) project growth in the region in fields such as health care and professional, scientific, and technical services. New opportunities are also emerging in industries such as transportation and warehousing and finance and insurance. In 2016, the single largest industry, as measured by

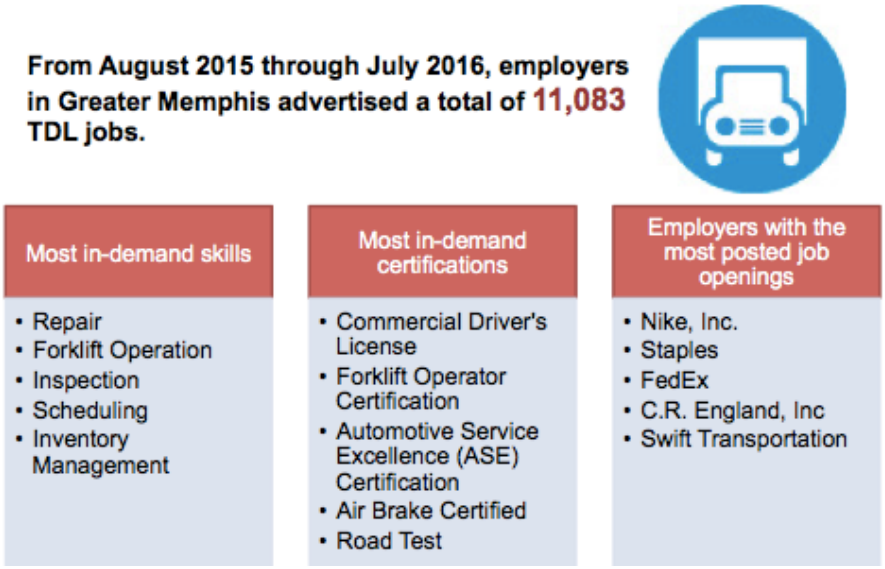
number of jobs, in Greater Memphis was health care. (See Table 2.) All of these industries offer average wages sufficient to support a family, though there is a great deal of variability in terms of wages across occupations within a single industry. According to MIT's Living Wage Calculator, a living wage for a single person in the Memphis Metropolitan Statistical Area (MSA) is $22,324 annually, or $10.73 per hour; those figures increase to $42,951 annually, or $20.65 per hour, for an adult supporting one child.[1] Average wages in two of the region's five largest industries—retail and administrative support—are below a living wage.

Table 2
Industries Ranked by Growth in the Number of Jobs from 2016 to 2025: Greater Memphis

Industry	2016 Jobs	2025 Jobs	Change	% Change	2016 Location Quotient	2025 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Health Care and Social Assistance	86,787	102,129	15,342	18%	1.09	1.11	$48,084
Administrative and Support and Waste Management and Remediation Services	72,177	87,009	14,832	21%	1.64	1.78	$29,249
Other Services (except Public Administration)	51,990	58,160	6,170	12%	1.36	1.41	$20,944
Professional, Scientific, and Technical Services	34,240	38,337	4,097	12%	0.71	0.72	$49,370
Accommodation and Food Services	49,142	52,527	3,385	7%	0.96	0.95	$17,226
Transportation and Warehousing	61,611	63,988	2,377	4%	2.60	2.49	$57,991
Educational Services	13,773	15,982	2,209	16%	0.83	0.87	$29,552
Finance and Insurance	28,178	30,034	1,856	7%	0.75	0.71	$78,126
Construction	30,104	31,847	1,743	6%	0.81	0.80	$42,194
Arts, Entertainment, and Recreation	11,877	13,027	1,150	10%	0.75	0.74	$28,794
Real Estate and Rental and Leasing	25,458	26,142	684	3%	0.84	0.81	$39,733
Management of Companies and Enterprises	7,171	7,466	295	4%	0.81	0.78	$109,752
Information	6,642	6,855	213	3%	0.54	0.56	$48,170
Retail Trade	64,265	64,454	189	0%	0.93	0.89	$31,148
Mining, Quarrying, and Oil and Gas Extraction	353	514	161	46%	0.06	0.07	$47,740
Unclassified Industry	15	0	(15)	(100%)	0.02	0.00	$56,755
Utilities	175	146	(29)	(17%)	0.08	0.07	$53,581
Government	72,349	72,269	(80)	(0%)	0.82	0.80	$49,559

Wholesale Trade	31,700	31,505	(195)	(1%)	1.34	1.26	$67,252
Crop and Animal Production	3,419	3,163	(256)	(7%)	0.26	0.25	$26,178
Manufacturing	41,471	40,482	(989)	(2%)	0.87	0.87	$74,410
*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors



Source: Labor Insight Jobs (Burning Glass Technologies)

Transportation, distribution, and logistics (TDL) is a major industry in Greater Memphis, which is home to FedEx's largest hub. The Greater Memphis Alliance for a Competitive Workforce, which aims to better align K-12 and postsecondary education with each other and with employer demand, is prioritizing TDL in its workforce development efforts. TDL is also a focus of the Regional Economic Development plan called the Memphis Fast Forward initiative.[2] However, a significant challenge is that very few of the most common jobs within the industry pay a living wage. Of the 20 occupations projected to be the largest in 2025, only five offer median wages above a living wage. (See Table 3.)

Table 3
Top 20 TDL Occupations Ranked by Projected Number of Jobs in 2025: Greater Memphis

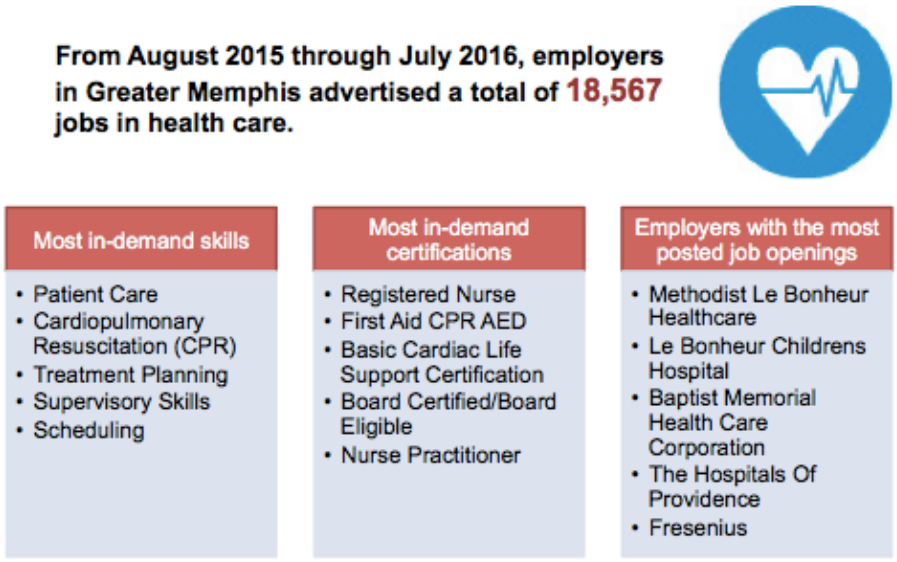
Occupation	2016 Jobs	2025 Jobs	Change	% Change	Median Hourly Earnings*	Typical Entry-Level Education
Heavy and Tractor-Trailer Truck Drivers	12,751	13,477	726	6%	$19.59	Postsecondary nondegree award
Office Clerks, General	11,377	12,055	678	6%	$14.00	High school diploma or equivalent
Customer Service Representatives	9,472	10,283	811	9%	$14.99	High school diploma or equivalent
Stock Clerks and Order Fillers	9,327	9,714	387	4%	$11.61	No formal educational credential
Packers and Packagers, Hand	6,606	7,083	477	7%	$9.06	No formal educational

						credential
Light Truck or Delivery Services Drivers	6,499	6,770	271	4%	$16.00	High school diploma or equivalent
Industrial Truck and Tractor Operators	5,998	6,212	214	4%	$13.14	No formal educational credential
Bookkeeping, Accounting, and Auditing Clerks	5,860	5,840	(20)	(0%)	$16.59	Some college, no degree
Shipping, Receiving, and Traffic Clerks	5,556	5,404	(152)	(3%)	$14.31	High school diploma or equivalent
Automotive Service Technicians and Mechanics	3,650	4,068	418	11%	$14.97	Postsecondary nondegree award
Management Analysts	3,115	3,266	151	5%	$35.35	Bachelor's degree
Business Operations Specialists, All Other	2,382	2,608	226	9%	$28.74	Bachelor's degree
Billing and Posting Clerks	2,106	2,358	252	12%	$15.04	High school diploma or equivalent
Conveyor Operators and Tenders	2,373	2,299	(74)	(3%)	$14.96	No formal educational credential
Production, Planning, and Expediting Clerks	2,174	2,224	50	2%	$20.68	High school diploma or equivalent
Cargo and Freight Agents	2,022	2,133	111	5%	$17.54	High school diploma or equivalent
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	2,118	2,083	(35)	(2%)	$24.32	High school diploma or equivalent
Civil Engineers	1,658	1,996	338	20%	$38.87	Bachelor's degree
Bus Drivers, School or Special Client	1,715	1,838	123	7%	$10.41	High school diploma or equivalent
Driver/Sales Workers	1,705	1,768	63	4%	$10.93	High school diploma or equivalent

*Wages below a living wage for one adult supporting one child appear in red.

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

In light of the size of the industry and its strong projected growth, health care is a generally promising sector for career pathways development. Forecasts indicate that, by 2025, the health care industry will grow by 19%, adding over 24,000 jobs, more than any other industry in the region. However, the design of career pathways in health care should take into account the variability of wages and salaries within the industry. Overall, average wages in the health care industry are sufficient to support a family, but numerous occupations, especially those that do not require graduate degrees, do not offer family-sustaining wages. Projections indicate that 14 of the top 20 (as measured by number of jobs) health care occupations in 2025 will require sub-B.A. credentials. However, of these occupations, only three generally pay wages sufficient to support a family. (See Table 4.) Pathways leading to careers such as respiratory therapists, dental hygienists, and radiologic technologists hold promise.



Source: Labor Insight Jobs (Burning Glass Technologies)

Table 4
Top 20 Health Care Occupations Ranked by Projected Number of Jobs in 2025: Greater Memphis

Occupation	2016 Jobs	2025 Jobs	Change	% Change	Median Hourly Earnings*	Typical Entry-Level Education
Registered Nurses	11,178	13,180	2,002	18%	$28.24	Bachelor's degree
Home Health Aides	4,477	5,892	1,415	32%	$8.41	No formal educational credential
Nursing Assistants	4,828	5,690	862	18%	$11.18	Postsecondary nondegree award
Licensed Practical and Licensed Vocational Nurses	2,717	3,129	412	15%	$19.00	Postsecondary nondegree award
Medical Assistants	2,550	3,075	525	21%	$14.05	Postsecondary nondegree award
Physicians and Surgeons, All Other	2,129	2,339	210	10%	$102.37	Doctoral or professional degree
Massage Therapists	1,543	2,109	566	37%	$11.45	Postsecondary nondegree award

Pharmacy Technicians	2,031	1,991	(40)	(2%)	$15.97	High school diploma or equivalent
Medical and Clinical Laboratory Technicians	1,707	1,921	214	13%	$18.58	Associate's degree
Pharmacists	1,921	1,848	(73)	(4%)	$56.85	Doctoral or professional degree
Emergency Medical Technicians and Paramedics	1,428	1,601	173	12%	$16.94	Postsecondary nondegree award
Medical and Clinical Laboratory Technologists	1,186	1,331	145	12%	$30.29	Bachelor's degree
Nurse Practitioners	900	1,120	220	24%	$46.73	Master's degree
Medical Records and Health Information Technicians	815	934	119	15%	$15.19	Postsecondary nondegree award
Radiologic Technologists	798	915	117	15%	$25.69	Associate's degree
Dental Assistants	756	866	110	15%	$17.75	Postsecondary nondegree award
Physical Therapists	696	812	116	17%	$38.01	Doctoral or professional degree
Surgical Technologists	666	775	109	16%	$19.82	Postsecondary nondegree award
Respiratory Therapists	684	770	86	13%	$22.09	Associate's degree
Dental Hygienists	632	709	77	12%	$30.53	Associate's degree

*Wages below a living wage for one adult supporting one child appear in red.

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Professional, scientific, and technical services is a large and growing industry, but it encompasses a wide range of subsectors that vary greatly in terms of projected growth and average wages. While many occupations in this industry require four-year degrees, there are numerous pathways available that require sub-B.A. credentials, and many of these pay above a living wage. The two largest subsectors in the industry—engineering and process, physical distribution, and logistics consulting—are associated with Memphis's TDL industry and offer family-sustaining wages. (See Table 5.)

Table 5
Top 10 Professional, Scientific, and Technical Services Industry Subsectors Ranked by Growth in the Number of Jobs from 2016 to 2025: Greater Memphis

Subsector	2016 Jobs	2025 Jobs	Change	% Change	2015 Location Quotient	2025 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Engineering Services	5,196	6,979	1,783	34%	1.34	1.63	$52,221

Process, Physical Distribution, and Logistics Consulting Services	1,598	2,405	807	51%	2.75	3.55	$44,577
Other Services Related to Advertising	1,001	1,376	375	37%	2.01	2.30	$22,951
Computer Systems Design Services	1,828	2,170	342	19%	0.47	0.45	$65,711
Other Accounting Services	1,846	2,185	339	18%	0.91	1.06	$30,541
Veterinary Services	1,418	1,714	296	21%	1.03	1.09	$38,198
Custom Computer Programming Services	1,624	1,904	280	17%	0.41	0.41	$60,723
Landscape Architectural Services	822	1,046	224	27%	2.47	3.00	$19,819
Tax Preparation Services	1,238	1,423	185	15%	1.42	1.59	$18,845
Environmental Consulting Services	374	507	133	36%	0.79	1.01	$52,035
*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Occupations in information technology (IT) represent important jobs in many fields in the professional, scientific, and technical services industry. The development of IT pathways would help prepare young people for good careers in sectors that are critical to the regional economy. Industries such as TDL and health care share important cross-cutting IT functions that will likely make IT skills increasingly important across a variety of occupations, including those in large and growing industries. Median wages in all but one of the top IT occupations are above a living wage. However, educational requirements for these occupations are higher than they are in many other places in the state. Of the top IT occupations, all but three require bachelor's or graduate degrees. (See Table 6.)

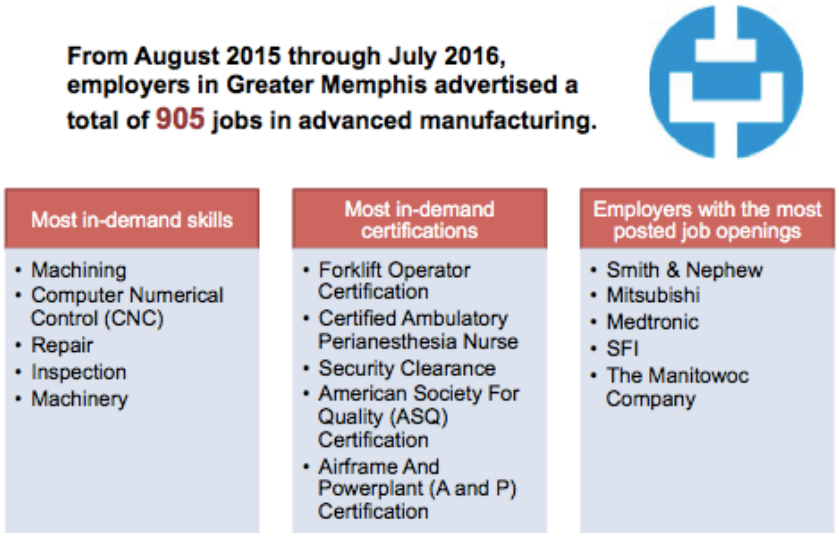
Table 6
IT Occupations Ranked by Projected Number of Jobs in 2025: Greater Memphis

Occupation	2016 Jobs	2025 Jobs	Change	% Change	Median Hourly Earnings*	Typical Entry-Level Education
Computer Systems Analysts	2,252	2,531	279	12%	$36.70	Bachelor's degree
Computer User Support Specialists	1,498	1,665	167	11%	$21.70	Some college, no degree
Software Developers, Applications	937	1,118	181	19%	$36.16	Bachelor's degree
Network and Computer Systems Administrators	969	1,047	78	8%	$34.91	Bachelor's degree
Computer Programmers	974	979	5	1%	$34.14	Bachelor's degree
Web Developers	813	973	160	20%	$20.27	Associate's degree

Computer Occupations, All Other	843	857	14	2%	$35.17	Bachelor's degree
Computer Network Support Specialists	672	719	47	7%	$30.84	Associate's degree
Software Developers, Systems Software	561	664	103	18%	$38.28	Bachelor's degree
Operations Research Analysts	487	543	56	11%	$31.93	Bachelor's degree
Database Administrators	339	369	30	9%	$38.25	Bachelor's degree
Computer Network Architects	157	170	13	8%	$42.92	Bachelor's degree
Information Security Analysts	130	154	24	18%	$26.43	Bachelor's degree
Computer and Information Research Scientists	35	40	5	14%	$34.20	Doctoral or professional degree
*Wages below a living wage for one adult supporting one child appear in red.						

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Some subsectors of the manufacturing industry are also promising areas in which to develop career pathways. While the manufacturing industry as a whole is not projected to experience growth over the next decade, forecasts show that there is likely to be strong growth in some significant subsectors of the industry, most notably in medical equipment and supplies manufacturing. (See Table 7.) Sectors such as medical equipment and supplies manufacturing and electrical equipment manufacturing use advanced manufacturing technologies. These industry sectors offer good career prospects for young people, and their continued growth is likely to be key to continued regional economic development. In addition, numerous subsectors in the industry have location quotients that are substantially greater than one. The location quotient is a comparison of an industry's share of employment in a region with its share of employment across the state. A location quotient above one indicates that an industry is more concentrated in a particular region than in the state as a whole. Industries with high location quotients are generally "export" industries that have particular economic significance because they bring money into a region.[3] However, while high salaries and growth in some manufacturing sectors, coupled with ongoing economic development efforts focused on manufacturing, suggest that manufacturing remains a viable sector for pathways development, it will be important to tailor those pathways to jobs in growing sectors of the industry.



Source: Labor Insight Jobs (Burning Glass Technologies)

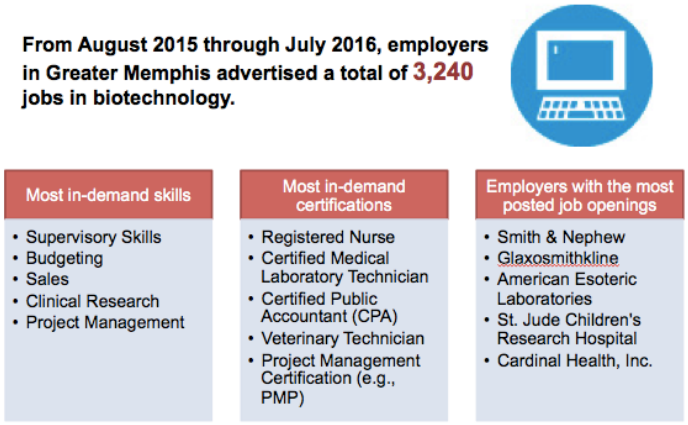
Table 7
Top 10 Growing and Declining Manufacturing Industry Subsectors Ranked by Change in the Number of Jobs from 2016 to 2025: Greater Memphis

	Subsector	2016 Jobs	2025 Jobs	Change	% Change	2015 Location Quotient	2025 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Growing	Medical Equipment and Supplies Manufacturing	6,536	8,513	1,977	30%	5.48	6.85	$90,424
	Dairy Product Manufacturing	961	1,215	254	26%	1.86	2.29	$59,498
	Boiler, Tank, and Shipping Container Manufacturing	520	722	202	39%	1.48	1.95	$63,163
	Iron and Steel Mills and Ferroalloy Manufacturing	252	383	131	52%	0.85	1.30	$42,364
	Pulp, Paper, and Paperboard Mills	3,239	3,360	121	4%	8.90	11.17	$161,471
	Commercial and Service Industry Machinery Manufacturing	498	619	121	24%	1.43	1.90	$49,595
	Tobacco Manufacturing	307	423	116	38%	6.43	12.62	$79,724
	Electrical Equipment Manufacturing	253	353	100	40%	0.45	0.64	$71,842
	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	1,041	1,139	98	9%	2.31	2.43	$42,567
Declining	Grain and Oilseed Milling	1,479	1,328	(151)	(10%)	6.60	6.13	$98,025
	Semiconductor and Other Electronic Component Manufacturing	495	338	(157)	(32%)	0.37	0.26	$45,239
	Cement and Concrete Product Manufacturing	446	273	(173)	(39%)	0.64	0.39	$41,579
	Beverage Manufacturing	1,070	875	(195)	(18%)	1.17	0.87	$53,220
	Other Wood Product Manufacturing	1,208	1,004	(204)	(17%)	1.29	1.09	$38,873
	Ventilation, Heating, Air-Conditioning, and	2,154	1,936	(218)	(10%)	4.51	4.17	$55,977

	Commercial Refrigeration Equipment Manufacturing							
	Pharmaceutical and Medicine Manufacturing	556	240	(316)	(57%)	0.53	0.22	$83,290
	Architectural and Structural Metals Manufacturing	1,775	1,450	(325)	(18%)	1.28	1.00	$65,087
	Converted Paper Product Manufacturing	1,168	596	(572)	(49%)	1.18	0.66	$67,005
	Printing and Related Support Activities	1,726	731	(995)	(58%)	0.92	0.45	$42,169
	*Wages below a living wage for one adult supporting one child appear in red.							

Source: 2016.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Biotechnology is a growing field and a promising area for pathways development. Pathways in bioscience would build on the region's strengths in health care and manufacturing—particularly medical equipment and supplies manufacturing—to prepare young people for careers in a cutting-edge industry that offers good wages and career growth opportunities. The most common occupations in the biotechnology field include medical and clinical laboratory technicians; medical scientists; registered nurses; medical and clinical laboratory technologists; and clinical research coordinators.



Source: Labor Insight Jobs (Burning Glass Technologies)

As stakeholders in Greater Memphis move forward with the Pathways work, it will be critical to develop opportunities for young people that recognize the important distinction between jobs and career pathways. Defining features of pathways include coordinated involvement from major employers in the area, opportunities for young people to enter and move up within a career field, and a focus on careers in which young people can expect to earn a family-supporting wage.

STATE LEADERSHIP AND POLICY ENVIRONMENT

Stakeholders in Greater Memphis benefit from an exceptionally strong set of state policies that provide a foundation for the work. Tennessee was among the initial six states to join the Pathways to Prosperity Network in spring 2012 and has been fast-moving and focused in adapting the Pathways to Prosperity framework and strategy to build stronger pathways to careers for Tennessee's young people. The Tennessee Department of Education (TDOE) leads the Pathways Tennessee work and staffs and convenes a Pathways State Planning Team comprising leadership from the Department of Labor and Workforce Development, the Tennessee Higher Education Commission, the Tennessee Business Roundtable, the Governor's Office, the Tennessee State Board of Education, the Department of Economic and Community Development, the Tennessee Council on Career and Technical Education, Tennessee Independent Colleges and Universities Association – Tennessee Board of Regents, and the State Collaborative on Reforming Education. Each member is integrating the Pathways Tennessee work into organizational goals and communications, including but not limited to: advocacy, funding, convenings, data sharing, and additional technical assistance needed to develop sustainable regional pathways statewide. The work is being carried out with effective leadership from Assistant Commissioner of Career and Technical Education Danielle Mezera and Program Director for Pathways Tennessee Nick Hansen. Pathways work is underway in all nine economic development regions with the support of state and local leaders. To support the Pathways strategy, TDOE is using Perkins Reserve Grants to provide assistance with the development of pathways in schools. The state also made non-competitive grants to support intermediaries—the organizations charged with aggregating work-based learning opportunities and with linking schools, community colleges, and employers.

The work of the Pathways Tennessee team is complemented by several statewide education initiatives. Governor Bill Haslam has continued the aggressive push of his predecessor to increase the postsecondary attainment rates of the Tennessee population under the banner of *Drive to 55,* with the goal that 55% of Tennessee citizens will have a postsecondary degree or credential by 2025 (currently, 32% of Tennesseans do). He has made substantial funding and human resource commitments to provide up-to-date equipment for the Tennessee College of Applied Technology (TCAT) system, "last-dollar" Promise Scholarships for college students to bridge the gap between Pell Grants and real student costs of attendance, and access to a variety of online learning opportunities, including launching Western Governors University Tennessee—an online, competency-based nonprofit university with a successful record of helping adults with some college, but no degree.

In addition, Tennessee's General Assembly appropriated $10 million for the Labor Education Alignment Program (LEAP) grant competition, which is part of the Drive to 55 initiative. The LEAP competition was intended to support regional work aligned with the Pathways Tennessee work or with Nashville's Skills Panel. LEAP grants were awarded to 12 regions across the state that are focused on increasing the number of Tennesseans who acquire postsecondary credentials aligned with local workforce needs. In December 2014, several Pathways Tennessee regions won LEAP grants. In Greater Memphis, two of the four counties have been

included in a regionally awarded LEAP grant. LEAP Memphis was awarded nearly $3/4 million to expand postsecondary workforce training programs focused on the Advanced Manufacturing and TDL sectors. Southwest Tennessee Community College and the Greater Memphis Alliance for a Competitive Workforce (GMAC) partnered with numerous stakeholders in education, industry, and governmental agencies to win this award. Based on the initial results from the *2016 LEAP Annual Report,* we are excited to see the potential expansion of LEAP Memphis programming through the 2016 LEAP 2.0 Grant Competition.

Tennessee is scaling SAILS (Seamless Alignment and Integrated Learning Support), a promising dual enrollment math initiative that prepares students for college-level math courses by introducing the college developmental math curriculum to students in their senior year of high school, thereby reducing student remediation needs at the postsecondary level. The program embeds the Tennessee Board of Regents Learning Support Math program in the high school Bridge Math course, which is required during the senior year of high school for students who took the ACT in their junior year and scored less than a 19 in math. The Governor's Office has provided over $1 million in funding to support the development of SAILS statewide.[4]

Tennessee Promise has the potential to expand access to higher education and career pathways, enabling exceedingly more high school students to earn two-year degrees in career areas of their choice. The Tennessee Promise targets seniors graduating from the state's public high schools. Along with the promise of a last-dollar scholarship, it builds in a set of requirements based on recent research on what keeps college students on track. Students must apply early in their senior years, complete the Free Application for Federal Student Aid (FASFA), attend mandatory advising sessions prior to beginning school, attend college full-time, and meet virtually or in-person with mentors a prescribed number of times per year. There is no GPA requirement; only the completion of high school is needed to qualify. Once in the program, students who wish to retain their scholarships must maintain a 2.0 GPA, complete eight hours of community service per term enrolled, and complete the FAFSA by February 15 every year that they are in the program. Tennessee lawmakers plan to invest a portion of state lottery funds in an endowment that will sustain the Tennessee Promise; additional funding for the program will be created by lowering HOPE scholarship awards for college freshmen and sophomores while raising them for juniors and seniors. The initiative, which launched in fall 2014, is intended to send a strong signal to young people, their families, and employers that the state's current postsecondary educational attainment rate is not sufficient to build and sustain a strong Tennessee economy.

In recent years, the state completed two phases of CTE Standards Revisions, a multi-step process to revise Tennessee's CTE course offerings and programs of study. The first phase streamlined the Programs of Study, while increasing alignment of secondary programs to postsecondary and career opportunities. Phase I was completed in fall 2012 and implemented for the 2013-2014 school year. The second phase involved the review and revision of specific course standards and the development of new courses to ensure all courses promoted by the department are rigorous, relevant, student-focused, and aligned to local industry need. The revised and new courses were rolled out in the 2014-2015 school year. Currently the state is in

the process of developing low-stakes and high-stakes course assessments to ensure that students are achieving marked growth in targeted skills attainment.[5] The state's CTE programs are based on the 16 nationally recognized career clusters.

The CTE Standards Revisions encompass a redesigned approach to work-based learning that emphasizes the importance of sequential work-based learning activities that help students prepare for postsecondary education and careers.[6] Changes to Tennessee's work-based learning policies, which went into effect for the 2015-2016 school year, included the development of a continuum of activities that span elementary school through high school. The state provides a comprehensive set of guides and other materials to support work-based learning in Tennessee. The Work-Based Learning Policy Guide sets expectations for district-level programs, student experiences, and learning outcomes, while the Implementation Guide provides examples and information on best practices. Districts across the state first participated in a work-based learning pilot program, which is now in the process of statewide expansion.

Both dual credit and dual enrollment programs are in place at the state level. In Tennessee, dual credit is earned via classes taught in high schools by high school faculty; students may earn postsecondary credit by demonstrating proficiency on exams. Both local and statewide dual credit programs exist. For the local dual credit program, postsecondary institutions develop or approve assessments; students who pass are awarded credit at the postsecondary institution that developed the exam. The statewide dual credit program offers standardized challenge exams through the Tennessee Board of Regents learning platform, and passing students earn credits that may be applied at any public postsecondary institution in the state. The statewide program began as a pilot in the 2013-2014 school year and currently includes five courses. Tennessee defines dual enrollment as postsecondary courses taught by college faculty (including credentialed adjunct faculty). The classes may take place on either high school or college campuses; students who successfully complete the course earn both secondary and postsecondary credit. The Tennessee Education Lottery Scholarship Program provides grant funding to cover the cost of dual enrollment. Since the 2015-2016 school year, Dual Enrollment Grants of up to $1,200 per year have been available to students. These grants cover tuition and fees for two dual enrollment courses (which cost $500 each) and provide $200 to defray the cost of a third dual enrollment class. Students who take additional courses may be eligible for further funding.[7] Two of the Greater Memphis region's postsecondary institutions, Southwest Tennessee Community College and the private, nonprofit William R. Moore College of Technology (Moore Tech) in Memphis, were also recently selected by the U.S. Department of Education to participate in a $20 million pilot program allowing low-income high school students to use Federal Pell dollars to pay for dual enrollment courses.

7-14 PATHWAYS

This supportive policy environment and leadership at the state level provide a strong foundation for building regional career pathways aligned with labor market demand. Grades 7-14 career pathways expand the range of options available to young people by preparing them for success in both college and careers. Ten years of data from early college high schools indicate that

taking college-level courses in high school is especially beneficial for underserved students. Student achievement is motivated by the opportunity to take free college courses and to accelerate postsecondary credit attainment, with a 90% high school graduation rate for early college students, as compared to the 78% national average rate. Dual enrollment is also associated with increased rates of postsecondary enrollment, persistence, and credit and degree attainment, as well as higher student GPAs and four-year graduation rates. Pathways through associate's degrees represent a first step on students' career ladders. Students who complete associate's degrees may choose to enter to the labor market and/or to pursue further education, including bachelor's and graduate degrees. Grades 7-14 pathways encourage student success in both college and career by equipping students with credentials valued by employers and with the skills needed to succeed in both college and the workplace.

In Greater Memphis, education leaders along with community and industry stakeholders recognize the value of preparing students for both college and careers and are committed to the Pathways work. Shelby County Schools' *Road to* 2025 initiative is focused on graduating 80% of high school students on time by 2025, with 90% of those graduates deemed college and/or career ready and matriculating onto postsecondary education or the workforce. However, Greater Memphis has undergone a momentous shift in education delivery over the past decade. Most recently, the community has navigated the many changes associated with the merger and demerger of Memphis City Schools and the suburban municipal school districts, respectively. Likewise, the creation and expansion of the state's Achievement School District (ASD) and public charter schools, which now collectively operate approximately 75 schools in the Greater Memphis community, have radically changed the level of competitiveness and parent choice throughout the region. These changes, along with other challenges associated with being the most impoverished large metro area in America, have stalled many positive reforms and efforts to collaboratively expand opportunity for youth in Greater Memphis.

Additional challenges in stakeholder mindsets remain, but there have also been recent efforts to collaboratively swing the pendulum to create more well-developed and impactful career pathways for the youth of Greater Memphis, both within the city and across suburban and rural communities. Greater Memphis benefits from the widespread and ever-expanding acknowledgement of the value of career-focused learning and clearly defined grades 7-14 career pathways among stakeholders in the region. High schools and centralized technical centers in the region have long provided extensive CTE programs that offer students with opportunities to develop a wide range of skills, however they are hampered by the historical stigma of vocational education and racially and socio-economically motivated student tracking practices. Many parents (suburban and urban) are consumed with the college-for-all mentality, believing that all students should pursue a four-year university education. The reality of the region is that fewer than half of its students matriculate from high school into four-year university programs. Innovative approaches to CTE, such as those employed by Shelby County Schools in partnership with TCAT Memphis, have helped to persuade students and their families of the value of career-focused learning. Municipal school district CTE programs are partnering with postsecondary institutions and employers to ensure that CTE completers have work-based learning experience, postsecondary credit, and an industry-recognized credential incorporated into their Programs of Study. Additionally, Arlington Community Schools partners with the

University of Memphis to provide high school students with a Career Preparedness course from which they earn college credits, while also exposing them to the world of work by incorporating the state's WORK-BASED LEARNING standards. Shelby County Schools CTE programs also overcome scheduling and transportation issues in order to serve students across five centralized technical education centers. Throughout the region, a number of CTE programs and comprehensive high schools offer programs of study aligned with regional workforce needs despite the many obstacles they face.

GMAC recently submitted a LEAP 2.0 proposal grant seeking the development of pathways focused on Machine Tool Technology to better serve the Medical Device Industry and its need for a skilled workforce. This grant would allow TCAT Memphis and Southwest to partner and serve students at Bartlett High School and Shelby County's Southwest Career and Technical Center.

Funds from the current LEAP Memphis grant are being used to support programs that aim to:

- Align skilled talent with regional need Manufacturing and TDL Industries
- Create new programming and offerings that fill skill gaps
- Expand postsecondary programs (including dual enrollment) in Manufacturing and TDL
- Create articulated education pathways along a continuum of skills that begins in high school and culminates with a postsecondary degree or employable credential

The region benefits from the presence of several strong postsecondary institutions that are already partnering with high schools and industry. In Tennessee, community colleges and TCATs play an important role in preparing students for careers. In fall 2013, Tennessee Technology Centers changed their name to Tennessee Colleges of Applied Technology in order to better reflect their emphasis on providing high-skill, college-level training with value in the labor market. Greater Memphis benefits from both the main campuses and satellite campuses of TCAT Memphis. TCAT-Memphis offers dual-enrollment programming to a number of area high schools, but stakeholders should strive to expand this programming providing more equitable access for all youth, especially those in the most remote areas of the region. As more community partners think outside the box to create innovative ways to collectively provide education and workforce training services, youth and disconnected young adults benefit greatly from the increased access.

Both community colleges and TCATs also consistently encounter difficulty in matriculating high school students into related programs of study that build on their high school CTE coursework and dual-enrollment classes, the primary purpose of a truly seamless pathway. Many students are taking advantage of the postsecondary opportunities at the high school level, but there seems to be a disconnect related to the learning continuum beyond the 12th grade.

While many exciting initiatives and partnerships already exist in Greater Memphis, developing a regional pathways strategy that ensures equitable access to these opportunities for all students will be a key challenge to address as the Pathways work moves forward. There was little mention of cross-district collaboration, although there are a number of bright spots in each of the

region's school districts. Project Lead the Way is in over 25 schools serving all grade levels in the region, introducing students to the STEM fields and disciplines starting as early as elementary school. Despite these highlighted proof points of successful career pathway components sprinkled around the region, absent region-wide collaboration there is little capacity to unify all these components into a cohesive pathways strategy.

A challenge is that career awareness and exploration programs are not necessarily sequenced or implemented in a systematic way that ensures that all young people and parents in Greater Memphis have access to information about a range of careers and corresponding postsecondary requirements and opportunities. Expanded career exploration programs would also help students and their families better understand the range of high-wage, high-demand jobs that require industry certifications and associate's degrees rather than bachelor's degrees. Several stakeholders noted that many students and parents need more information about middle-skills job opportunities and burgeoning sectors within the region. A more unified approach to career exploration and advising could help overcome these barriers. Existing initiatives could benefit from having a centralized point person or intermediary to unify their efforts in order to reach more students in a systematic fashion. Moreover, organizations that offer career awareness and exploration programs could leverage one another's work by collaborating or referring students to the appropriate resources. An effective communications strategy will be key in facilitating this process.

CAREER INFORMATION and ADVISING

Middle and high school students often have little access to information about the world of work, even though they are at an age where their choices may affect their future opportunities. A strong career and advising system is therefore an important component of the Pathways to Prosperity framework. This system should provide students with a continuum of experiences—from awareness to exploration to immersion—that familiarizes students with the world of work and the range of career possibilities available to them in Greater Memphis and beyond. Stakeholders in Greater Memphis highlighted the lack of career-focused counseling throughout their schools, believing a more targeted approach to providing career information and advising is needed to ensure that young people are able to make informed choices about their futures rather than perpetuating negative traditions, such as a reliance on temp services to find employment. The Pathways work presents an opportunity to better align and expand the opportunities currently available to middle and high school students in the region and to ensure that students have access to a clear sequence of career exploration activities.

Students in the region have access to some career information and advising in schools, but many young people rely primarily on family and friends for information because school-based efforts are generally not systematic and do not provide opportunities for in-depth career exploration. More work needs to be done to ensure that students have access to individualized and consistent career advising. Shelby County Schools reported having one guidance counselor for every 650 students, a figure that far exceeds the ratio of 250:1 recommended by the

American School Counselors Association. Additionally, stakeholders signaled that most guidance counselors are too disconnected from the world of work and do not incorporate labor market information or industry awareness into their interactions with students, instead focusing much of their time on testing and school disciplinary issues. With significant time being spent on multiple duties from testing to college guidance, counselors have little, if any, time to provide students with personalized career-focused guidance. Though schools use interest inventories, career fairs, and guest speakers to occasionally expose students to their possible futures, these one-time events are not likely to provide students with a full understanding of career opportunities or to equip them with the skills they will need to make important decisions about educational and career options available in Greater Memphis.

Teachers also tend to be a key source of career information and advising, but stakeholders in the asset mapping interviews agreed that many counselors and teachers would benefit from additional information about the world of work. Additionally, teachers too wear multiple hats and should not be relied upon as the primary source of career advising. Districts in the region should consider creating professional development opportunities, including externships, that prepare teachers and counselors to advise students on a range of career options by providing teachers and counselors with opportunities to learn about a variety of industries. Professional development efforts should also ensure that counselors are familiar with available dual credit and dual enrollment options and are prepared to advise students about these opportunities.

Some schools and districts are engaged in efforts to enrich and strengthen the career exploration options available to students. However, stakeholders generally agreed that all students would benefit from sequenced career exploration activities starting earlier at the middle school level. Additional interdisciplinary and project-based learning activities, which could be introduced at the middle school level and further developed at the high school level, would provide students with supplementary opportunities to develop cross-cutting skills.

Pathways leads might consider ways to reinforce these short-term opportunities by aligning them to the school curriculum and the postsecondary degrees that lead people to the types of careers highlighted by existing career exploration activities. Greater integration and expanded career exploration opportunities would likely help to encourage student interest in growing career fields and help to bring student enrollments in CTE programs into better alignment with labor market demand.

EMPLOYER ENGAGEMENT AND WORK-BASED LEARNING

Preparing young people to join an educated and skilled workforce requires employer engagement. Pathways must be responsive to labor market demand if they are to lead young people to satisfying and family-sustaining careers that contribute to regional economic development. Employer engagement in the Pathways work includes collaborating with educators, providing work-based learning opportunities to students, and supporting young people's transitions into the labor market. A skilled workforce is needed in the region to continue to attract and retain employers in fields such as manufacturing and health care. While

employers in Greater Memphis are generally supportive of efforts to better prepare young people for careers, and some companies offer summer internships or work-based learning opportunities, the engagement of most employers in such efforts, particularly at the K-12 level, is currently rather limited. In some key industries, employers have taken on a leadership role in educating young people, and their work could serve as a useful model for counterparts in other industries. In general, however, work-based learning opportunities such as internships are not available widely or at scale, and partnerships between employers and educators are often built on personal relationships, which hinders replication and expansion. Developing a framework for employer engagement that systematizes the role of employers in the Pathways work will be useful both in scaling up work-based learning opportunities and in providing employers with a better understanding of how to engage effectively and efficiently.

Greater Memphis is home to many stakeholders and organizations who are participating in efforts to increase postsecondary attainment and to provide young people with exposure to a range of careers, but they are not necessarily connected to a greater vision around Pathways. The City of Memphis's Office of Youth Services has two programs aiming to give students career preparedness, the Mploy program and the Memphis Ambassadors Program (MAP). Mploy partners with city and county agencies and industry partners to provide meaningful, paid summer internships to nearly 1,000 Memphis youth, though placements are not necessarily tied to students' secondary programs of study or future aspirations. The MAP program is a year-round youth development program providing wrap-around training and education for college and careers. We learned of both programs through online research, but very little was mentioned of the programs during our two days of interviews. The intermediary section of this report that follows will address this dynamic in more detail. With so many students in need of direction, it will be critical to align employer engagement efforts to ensure students have clear pathways and do not fall through the cracks.

One of the nation's best examples of "Earn and Learn" WORK-BASED LEARNING programming is the *12 For Life* program in Carroll County, GA. The *12 For Life* initiative is a collaboration among Southwire, a wire and cable manufacturer, the Carroll County Schools, and the Carroll County Chamber of Commerce. *12 For Life* actually targets struggling students for the program and provides them the opportunity to gain paid work experience at a built-for-purpose Southwire production facility while attending high school. The region as a whole should strive to implement similar efforts to expand work-based learning opportunities and industry-aligned CTE programs to high school youth, looking first to engage employers to provide paid summer internships and pilot programs.

Employer engagement strategies should be framed around assisting employers to help themselves by taking the reins for developing their own talent pipelines. This stresses a self-interest approach as opposed to an altruistic approach. Employer engagement activities done in the spirit of corporate social responsibility often lessen commitment, sustainability, and impact, especially in times of economic downturn. Although a primary concern heard from many in the region is Memphis citizens' reliance on temp services, this only compounds the issue until employers engage at a level of depth to develop their own talent pipelines. Despite multiple

mentions of companies struggling to fill openings or having to resort to hiring through these temp agencies, very few employers in the region were seen to engage at the level of Southwire. Leaders across industries expressed enthusiasm towards a pathways model and a belief in what it could accomplish for the region, but the region must prioritize leveraging that enthusiasm and converting it to employer engagement and action to produce results for young people. The key is to engage employers at a level they would not otherwise engage, while asking for shared commitments that produce a collaborative impact that far exceeds individual employer capacity. The region is beginning to use tools such as the ACT WorkKeys which can not only be used to provide students with informative academic feedback and career direction, but can also be used to engage employers through Job Profiling, whereby specific positions in Greater Memphis are audited for skills necessary for success and aligned to student performance on a variety of components and performance levels on the WorkKeys exam. Employer engagement centers around industry both identifying gaps in their ability to find talent and taking the initiative to partner with educational institutions to then develop their own talent pipelines.

Finding ways to bring young people into the world of work will be critical to developing their interest and skills in high-demand fields. While there are some examples of employer engagement, barriers still remain that need to be addressed to scale work-based learning, including identifying employer opportunities for students' *workplace* learning (i.e., internships and apprenticeships) to meet the demand, and more clearly identifying and communicating the value-add that students bring to employers through these experiences. A consistent challenge has been arbitrary corporate policies and culture that require that workers in fields such as manufacturing and health care be at least 18 years old, a cut-off that excludes most high-school students. Other barriers cited by stakeholders include compensation requirements for entry-level work, businesses' exposure to liability for student accident/injury, and the time and capacity required to manage internship programs. In light of Tennessee's strong state-level policies to support WORK-BASED LEARNING, it would likely be beneficial for stakeholders in the region to work with state agencies and local workforce development partners to develop a strategy for overcoming these perceived barriers.

As employers consider ways to expand their involvement in developing a talent pipeline through WORK-BASED LEARNING, it will be critical to ensure that all stakeholders share a common definition of work-based learning. WORK-BASED LEARNING opportunities should be designed as a sequenced and coordinated set of activities through which students gain increasing exposure to the world of work. Examples of possible activities in a work-based learning sequence, ordered from least intensive to most, include:

- Hearing from guest speakers
- Participating in company tours/field trips
- Job shadowing
- Participating in virtual internships
- Working with industry mentors
- Participating in summer internships
- Participating in year-round internships and apprenticeships

The Pathways to Prosperity framework advocates for paid work-based learning experiences for students, in part because students may need to earn money for their own expenses or to contribute to their families. These students may take entry-level jobs in industries such as food services or retail out of necessity, rather than participate in more meaningful, but unpaid, work-based learning opportunities in an area of interest. In addition, receiving payment for their work encourages students' momentum and motivation, often developing into a shared commitment between employer and intern, which can lead to long-term employment. Funding issues related to WORK-BASED LEARNING are a challenge, but the City of Memphis has stepped up to cover intern stipends in the case of the Mploy program. This should initially relieve employers' concerns about the feasibility of providing paid internships, which opens the door for program leadership to then ask the employers to cover their own interns once they have seen the value of the internship program.

Bringing students into workplaces would provide employers with opportunities to take an active role in shaping young people's development of work-readiness skills, a need identified by many of the stakeholders with whom we spoke. Work-based learning opportunities give students the opportunity to hone existing skills and to further develop as young professionals. Stakeholders mentioned a lack of soft skills in many youth and an inability to meet minimum expectations for job timeliness and effort. These are skills that many youth are not developing in schools, but instead develop over time when exposed to meaningful work opportunities and increasing release of responsibility on the job site. Engaging in this work represents an opportunity for regional employers to ensure that young people have the skills needed to create a strong and vibrant talent pipeline.

INTERMEDIARIES

In addition to the levers already described, intermediaries represent an essential element of the Pathways framework. The work of the WIN and GMAC serve as examples of the many partnerships and educational opportunities that can be created when organizations and institutions work together in a community. This cannot be accomplished absent a strong intermediary tying it all together and driving the work forward. Within the Pathways to Prosperity framework, an intermediary organization connects key stakeholders, including employers and educational institutions, and creates a body of knowledge and skills to serve the collective goals of the partners. The work of intermediaries includes two broad sets of functions. First, intermediaries hold the vision for the Pathways work and convene key stakeholders. Second, intermediaries support the development of work-based learning opportunities by establishing a role for employers that ensures they see a return on their investment in the education of young people and by supporting high schools and colleges in securing, developing, and sustaining sequenced, systemic work-based learning opportunities. A single organization may take on the entire intermediary role, or the intermediary functions may be spread across multiple organizations. For example, a regional steering committee could play the convening role, while an employer association could broker work-based learning opportunities. Identifying

organizations that are able to play an intermediary role and deciding on which path to take through a transparent and unambiguous process will be key to advancing regional pathways work in Greater Memphis.

For context, Pathways to Prosperity highlights six functions of intermediaries:[8]

- **Organize a cross-sectoral top leadership group** to hold the pathways vision and to provide the glue between employers.
- **Oversee appropriate analyses***,* including current and forward-looking labor supply-demand gap analyses, as preparation for conducting other functions.
- With support of top regional leadership, **recruit and enlist representatives of key business, labor, and nonprofit employment sectors** to provide adolescents and young adults with workplace experiences.
- **Assess needs for support** from schools and employers and broker agreements to provide it. Support functions can include:
    - Developing workplace experiences (e.g., job shadow, virtual projects, internships, apprenticeships)
    - Executing agreements between employers and schools
    - Providing training in the basics of a career area (including work-readiness certifications)
    - Developing curricula and assessments in partnership with educators
- **Establish metrics for success** in consultation with employers and schools, report publicly on progress, and hold participants accountable through an MOU or other formal agreement.
- **Assure sustainability.**

As the Pathways to Prosperity work moves forward, it will be essential to ensure that all intermediary functions are filled in the region, which will likely require additional funding for dedicated staff time. The intermediary role may be taken on by a built-for-purpose organization, or it may be housed in an existing organization. If it is housed within an existing organization, it is important to be strategic about selecting an appropriate organization in order to ensure that the intermediary is well-respected and perceived as a neutral broker by all stakeholders.

The convening intermediary role includes gathering stakeholders, building public support for the Pathways work, establishing metrics, developing and maintaining a vision for the work, and assuring sustainability. Given the need to systematize regional coordination in Greater

Memphis, it will also be important to ensure that any entity that takes on the convening functions is truly regional in scope and representative of all stakeholders, whereas many of the conversations we had were focused geographically either within the city limits or at the municipality level. Additionally, very few conversations addressed Shelby's surrounding counties within this TNECD region, although Lauderdale and certainly others have career pathways assets in place, such as CTE programming and multiple existing postsecondary partnerships. Though no single existing entity appears to be especially well-positioned to take on this role, given current institutional reach, existing organizations would likely need to invest in capacity-building to effectively take on this role. Greater Memphis has an abundance of individuals representing organizations that together could form a dynamic regional steering committee, though many of these individuals already serve on multiple boards and advisory councils and a Pathways Steering Committee would need to take priority to be an effective region-wide intermediary. Many stakeholders shared their enthusiasm about working with postsecondary institutions, employers, and school districts to align resources and create pathway opportunities. The key will be to establish a group with the needed regional scope to work across urban, suburban, and county lines, who can also leverage pre-established cross-sector relationships that include postsecondary and industry partners. Additionally, though a steering committee or existing organization can be a powerful convener, a full-time Pathways-focused professional is often necessary to organize and drive the work of committee members, who will typically serve on the committee as an off-shoot of their daily work.

In addition to these convening functions, regional intermediaries positioned to aggregate and broker work-based learning opportunities are needed to scale up and coordinate work-based learning across each region. Given the region's large population and varied community needs, it may make sense for Greater Memphis to identify several work-based learning intermediaries, focused on specific sectors as identified by LMI. Some organizations in the region have already taken on some functions of WORK-BASED LEARNING intermediaries, such as the Office of Youth Services and the WIN. Organizations with experience bringing together educators and industry partners are often well-positioned to play this role.

It is recommended that stakeholders in the Pathways work move quickly to identify possible regional intermediaries, because operationalizing the work plans that will be developed based on this report will almost certainly require dedicated staff time. Once potential intermediaries have been identified, the next steps will be to evaluate their capacity to carry out the work—or to add staff to carry out the work—and to seek additional funding as needed to create the necessary capacity.

OPPORTUNITIES AND KEY QUESTIONS FOR PLANNING

The wide community support for the Pathways work indicates strong potential for successful Pathways implementation. While much work remains to implement elements of the Pathways levers, it is achievable, given stakeholders' enthusiasm for the work. There is widespread recognition that a pathways system will help ensure that young people in Greater Memphis are prepared for postsecondary education and careers, while also promoting economic development and strengthening business and industry. The region is therefore well-positioned

to address important community challenges.

In order to maximize this potential, the asset mapping team has developed a series of key questions for leaders in the region to address as they develop a Pathways work plan.

Focus and Scale

- Which industries should be the focus of the Pathways work?
- How can stakeholders best ensure that the Pathways work is aligned with current and future economic development strategies at the state and regional levels?
- What scale of initiative is most appropriate for the region? How many schools and young people should the Pathways work target and for what jobs?
- What criteria are most important to the selection of Pathways sites?
- How can the Pathways work best be structured in order to promote equity and increase opportunities for students in all of the districts in the region?
- What performance measures will be used to monitor progress and hold stakeholders accountable?
- How will a communications plan be developed? How will that plan address key questions about the work and public perceptions of regional career and postsecondary opportunities?
- How might the region use its widely networked and engaged community leaders in order to build support for the Pathways work?
- Do the regional boundaries for Greater Memphis make sense, given the overlap between this region and Northwest and Southwest Tennessee in terms of both specific initiatives such as LEAP grants and the interconnected regional labor markets? How could/should Arkansas and North Mississippi be included?

Pathways Development

- What are the best starting points for the Pathways work in the region? What partnerships and programs already exist that could be leveraged to support the development of grades 7-14 pathways?
- What process will be used to ensure that pathways are aligned with labor market demand?
- What will the components of the pathways curriculum look like at the secondary and postsecondary levels? What industry-recognized credentials will be embedded in these

pathways, and when and where will students in the pathways participate in work-based learning?

- What resources are needed for high school CTE programs to build or expand programs of study aligned with labor market demand? Would it be feasible for districts to share faculty or facilities and equipment in order to reduce costs?

- How will teachers be engaged in the Pathways planning process? What supports for implementation will districts offer to faculty?

- What additional resources are needed to ensure that middle school, high school, and postsecondary curricula are vertically aligned and dual enrollment functions seamlessly? Is a dedicated staff person required to oversee the process?

- What resources or supports would be needed to increase the capacity of postsecondary institutions to serve young people interested in pursuing careers in health care?

- How might stakeholders collaboratively address the need for additional transportation options for students seeking to take advantage of opportunities such as dual enrollment and career exploration and work-based learning programs given the region's geography?

Career Exploration and Advising

- Has the Governor's announcement of funding towards career coaches and AdviseTN made it onto anyone's radar in Greater Memphis, and if so, what opportunities exist there?

- What would a more systematic approach to advising and career exploration look like? How could stakeholders across the region collaborate to create more systematic and in-depth career exploration opportunities for students?

- How are student participants in career exploration programs recruited or selected? How can this process be managed in a way that ensures equitable access for all students? How can career exposure and exploration be continually pushed to reach students at an earlier age?

- How might the Pathways work be used to support collaborative planning across schools, districts, and community partners for sequenced career exploration activities?

- What resources are available to support counselors and teachers and to help them become more familiar with the world of work? What additional professional development opportunities, including externships, could be developed and what would it take to do so?

- What strategies have sites within the region developed for educating parents about available career options, and what opportunities exist to scale these up across the region?

Employer Engagement and Work-Based Learning

- What do businesses view as the best and most feasible ways they can engage with high school students? What do businesses perceive as their greatest challenges in taking on and managing interns? How can businesses be encouraged to engage at a more impactful level?

- How might the strong relationships that postsecondary institutions in Greater Memphis have already developed with employers be leveraged in order to strengthen employer engagement at the high school level?

- What are potential funding pools for compensating students participating in on-site internships?

- What organizations or individuals could potentially manage a unified process for employer engagement with schools?

- From a business perspective, what is the ideal timeline for engaging and communicating with schools? Does this timing align with schools' availability?

- What resources or examples exist or could be developed to help employers think through challenges such as the requirement that workers be at least 18 years old? What state-level resources or strategies could be brought to bear in efforts to address perceived barriers?

- What strategies to make the best possible use of employers' time can be developed? Would a work-based learning curriculum or other tools for designing work-based learning experiences be helpful?

Intermediary Leadership

- How should intermediary functions be structured or distributed? Given the scale and structure of the region, would it make sense to designate a single regional convening intermediary or steering committee and multiple local work-based learning intermediaries?

- What organizations could be particularly effective at building public support for the Pathways vision? Who are regional champions of the Pathways work that can serve as ambassadors to promote the work throughout the community?

- What other organizations could serve as conveners, brokers, and technical assistance providers?

- What organization has—or could build—the capacity to take on the logistics and operational work needed to support Pathways?

- What barriers to working across urban, suburban, and county lines must be navigated?

- How could the region fund a full-time dedicated Pathways professional to serve as a chief coordinator for the ultimate intermediary group?

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[1] MIT, "Living Wage Calculator." http://livingwage.mit.edu/metros/32820
[2] http://www.memphischamber.com/The-Chamber/Councils/Regional-Logistics.aspx
[3] For more detail, see Economic Modeling Specialists, Inc., "Understanding Location Quotient." Accessed September 28, 2014. http://www.economicmodeling.com/wp-content/uploads/2007/10/emsi_understandinglq.pdf
[4] Chattanooga State Community College, "Sails Overview." Accessed August 28, 2014: http://www.chattanoogastate.edu/high-school/sails
[5] Tennessee Department of Education, "Standards Revisions: Phase II." Accessed August 28, 2014: http://www.tn.gov/education/cte/standards_revisions.shtml
[6] Tennessee Department of Education, "Work-Based Learning Frequently Asked Questions." Accessed November 3, 2014: http://www.tn.gov/education/cte/phase2/WORK-BASED LEARNINGFAQ.pdf
[7] Tennessee Department of Education, "Early Postsecondary Opportunities." Accessed November 3, 2014: http://www.tn.gov/education/cte/postsecondary.shtml
[8] This report often uses the term "intermediary functions" rather than "intermediary organization." It is possible to spread the functions across people and organizations.

Appendix Item 3: Focus Group Tool

Pathways Tennessee Site Observation Tool

This tool has been created to act as a guide to implementing the six main components of the Pathways TN framework. Intermediary organizations should work with their respective teams to identify where the work currently exists in regards to the listed criterion and prepare sample evidence to support the claim.

7-14/16 PATHWAYS

	Criterion	**Initiating**	**Developing**	**Demonstrating**	***Sample Evidence Examples***
Accountability	*Outcomes*	Outcomes are currently in development or outcomes exist for the pathways work, but they may not have group consensus.	Outcomes exist for the pathways work and are valued by stakeholders but may not be well defined.	Well-defined, meaningful, and relevant outcomes exist for the pathways work. All stakeholders strive to achieve the outcomes.	• *Strategic plan* • *Letters of support* • *SMART goals* • *Mission/vision statements*
	Process of gathering data	There is no clear plan in place for gathering data, assessing progress, and making subsequent modifications to programs and practices. Needed data may have been identified, but sources and timelines have not.	There is a clear plan in place for gathering data, assessing progress, and making subsequent modifications to programs and practices, but the plan is not currently being implemented. Team has identified data sources and timelines.	There is a clear plan in place for gathering data, assessing progress, and making subsequent modifications to programs and practices. The plan outlines when data will be accessed, when it will be reviewed, and what the sources are.	• *SWOT analysis* • *Strategic plan updates/progress reports* • *Planning documents* • *Data sources and timelines*
	Use of Data	Stakeholder data doesn't align or isn't shared among stakeholders to determine shared progress towards desired outcomes.	Stakeholders collectively share data sources but use different sources that show conflicting information.	Stakeholders continually use reliable and aligned data to assess progress towards desired outcomes and data source usage is reflective across agencies and organizations.	• *SWOT analysis* • *Strategic plan updates/progress reports* • *Planning documents* • *Data sources and timelines* • *List of organizations and data sources for decision making*

Accountability	*Target Population*	Pathways currently serve only a cross-section of students that is not representative of local demographics.	Pathways serve a range of students representative of local demographics, but not all students in pathways participate in a coherent program of study.	Pathways serve a range of students representative of local demographics. All students in pathways participate in a coherent program of study.	• *Pathway metrics* • *Student achievement and demographic data* • *Program marketing and promotion*
Community and Culture	*Postsecondary and Career Readiness*	The culture is focused on college, career, or neither. College is considered a 4-year program; other postsecondary programs are not well promoted to students.	Though a college-going culture and a focus on career readiness both exist, students and staff demonstrate and/or express that one is more highly valued over the other.	There exists a strong postsecondary-going culture and a sharp focus on career readiness among students and staff in pathways partnering schools. Postsecondary and career are equally ingrained in the school culture.	• *Posted materials* • *Classroom observations* • *Documented postsecondary/career plans* • *Surveys* • *Graduation Requirements*
	Initiative Awareness	Students, families and community members are unaware of pathway options and there is little to no community or parent/caregiver engagement.	Students, families and community members are somewhat informed about the pathways work, but information may not be tailored to a specific audience. They may not understand how pathways impact the community.	Materials and awareness efforts reach targeted populations (students, parents/caregivers, industries, etc.) who understand the available pathways, how to enroll in a specific program, the supports available, and how to be a partner.	• *Communications materials* • *Events for parents/caregivers and community* • *Funding for programs, initiatives related to the pathways*
Curriculum	*Scope and Sequence*	9-12 programs of study may exist and may be implemented, but they are neither aligned to each other nor to postsecondary offerings, labor market trends, or workforce needs.	9-12 and postsecondary sequencing of courses are defined and implemented, but they are infrequently utilized by students due to logistical (scheduling) issues, lack of planning, etc. A limited number of postsecondary credit opportunities (1-3) exist at the high school level relevant to the pathway.	A 7-14/16 scope and sequence for core and technical coursework is clearly defined and implemented, and it aligns to labor market trends and workforce needs. Any interested student is able to successfully plan for and complete the scope and sequence. Work-based learning, 4+ postsecondary credit opportunities (2 of	• *Documented pathway (course codes, CIP code, SOC codes)* • *Articulation agreements* • *WBL placements*

				which are in a CTE program of study) and aligned industry credentials are all available to students within the pathway.	
	Credentials with Value	Pathways do not have an aligned credential or are offering the wrong/ mismatched certification for the program of study identified for the pathway.	Pathways lead to postsecondary credentials, but they either are not valued by employers in the labor market or do not align to a career ladder or postsecondary program.	Pathways lead to postsecondary credentials valued by employers in the labor market. Credentials connect to a career ladder and are supported by the Tennessee Department of Education and Tennessee Board of Regents as the appropriate credential for the pathway.	• *Labor market data* • *Number of students earning industry certifications within pathway* • *Pathways reflect the industry certification policy guide (TDOE)*
	Credit Alignment	Early postsecondary opportunities (EPSOs – early college credit such as AP, dual credit/dual enrollment) are not aligned with a program of study that leads to a postsecondary credential within the pathway area of focus.	EPSOs are aligned with a program of study that leads to a postsecondary credential. There are 1-3 EPSOs available in the pathway for a student to sit for in both core academics and CTE programs.	EPSOs are aligned with a program of study that leads to a postsecondary credential. There are 4-6 EPSOs available in the pathway for a student to sit for in both core academics and CTE programs.	• *Program of study course sequence* • *Pathways documentation tool* • *Articulation agreements*
	Work-Based Learning (Structure, Sequence, Depth)	Disconnected Work-Based Learning (WBL) activities exist and are not systematically reflected upon to build towards deeper forms of WBL.	Some forms of WBL exist at all grade levels and a structure exists to support students engaging at all grades, and students are asked to reflect upon their experiences.	Students experience WBL across all grades and see the continuity between their experiences. They build upon previous experiences to shape future ones, and at the highest level, student experiences are culminating in capstone WBL that aligns with their pathway and postsecondary plans.	• *WBL Scope and Sequence/Continuum* • *Curricular materials* • *Documented examples of WBL across grades* • *Student college and career planning documents*

	WBL Capstone Accessibility	High schools provide WBL capstone experiences to some students, but it is not accessible to all students. Sometimes placements align to targeted careers. WBL coordinators may attend WBL PLCs.	High schools provide WBL capstone experiences that are accessible to all students, but placements are limited or are not always relevant to all programs of study. Some WBL coordinators attend WBL PLCs and have some school and community stakeholders who provide some targeted WBL placements. Additional placements are needed to fully support all targeted career areas and or programs of study.	High schools offer capstone WBL options accessible to all students. All WBL coordinators are active participants in WBL PLCs and collaborate with school and community stakeholders continuously to place students in all targeted career areas that build on programs of study. *WBL offerings include at least WBL: Transitions (6107) + WBL: Career Practicum (6105) and may also offer additional capstone courses specific to each targeted program of study (such as Clinical Internship or Engineering Practicum)*	• *Students completing WBL capstone experiences graduate with distinction (see state board high school policy 2.103).* • *WBL enrollment in capstone experiences is reflective of the student population and is consistently offered across all programs of study.* • *WBL Coordinators annually update their WBL certificates through active participation in WBL PLCs.* • *WBL coordinators serve on community groups to grow program placements, and documentation reflects their participation and advocacy.* • *WBL is promoted to all students systematically.*

CAREER INFORMATION AND ADVISING

	Criterion	**Initiating**	**Developing**	**Demonstrating**	***Sample Evidence Examples***
Academic Opportunities	*Early Postsecondary Access*	There is limited or no access to, and enrollment in, early postsecondary opportunities (EPSOs) for students that are regionally relevant (aligned to a postsecondary institution's offerings in the service area and local labor market demands). EPSOs could include AP, IB, dual enrollment, dual credit, etc. Clear policies and resources do not exist at the school level to increase enrollment in EPSO offerings. Advising and support structures are not in place for students. Awareness of EPSOs may be limited among students and parents/caregivers.	Students have access to multiple EPSOs that are regionally relevant but enrollment is limited. Limited policies and resources exist at the school level to increase enrollment in EPSO offerings. Advising and support structures are in place, but may not reach all students. Awareness of EPSOs among students and parents/caregivers could be expanded.	Districts offer a variety of early postsecondary options across general education and CTE programs. Enrollment in and successful completion of EPSOs are increasing. Clear policies and resources exist at the school level to promote enrollment in EPSOs and awareness among students and parents/caregivers. Advising and support structures are in place and are available to all students.	• *Increase in student success rate in EPSOs* • *Increase in student enrollment in EPSO offerings* • *Increase in student enrollment numbers* • *Increase in the number of EPSOs offered (portfolio approach)* • *School board policy* • *MOU* • *Marketing materials* • *Parent/caregiver feedback*

Student Counseling Supports & Advising	*Social and Emotional Learning*	Processes are in place to address students' social and emotional concerns as needed. Prevention activities are limited. Individual counseling is available.	Processes and supports are in place to address students' social and emotional needs. Referral processes are clear and reviewed with faculty and staff. Students are referred to counseling when behavior interrupts their learning. Administration sometimes utilizes counseling services as an early intervention for discipline referrals.	All students have access to high quality social and emotional prevention and intervention support that could include individual and group counseling, large group/classroom activities, mentoring, participation in student activities aligned to their interests/abilities and service learning. Faculty and staff regularly consult with counseling staff regarding the social and emotional needs of their students. Administration regularly utilizes counseling services as an early intervention for discipline referrals.	• *Participation rates for individual and group counseling* • *Counseling referrals* • *Discipline referrals, include suspension/expulsion rates* • *Attendance rates* • *Counseling program management agreement that includes prevention activities*
	Academic	Student data is being collected but a systematic review of data by a team is not in place. A process for developing intervention plans for students is currently in place at the school level.	A process is in place to identify students at risk of missing an educational milestone. The process may not include all stakeholders, includes limited intervention opportunities, and/or it is implemented with partial fidelity.	There is a clear and coherent process for developing an intervention plan for students who are not meeting academic and/or college/career benchmarks that includes multiple stakeholders and is based on the student's associated area(s) of deficit. The plan is implemented with fidelity. Outcome data is available that shows effectiveness of the intervention method.	• *Intervention plan* • *Student performance data* • *List of target students* • *Intervention materials*
	College and Career Readiness	Systems and structures for delivering high-quality college and career counseling and advising are in development. Students have access to minimal	Systems and structures to ensure students receive high-quality counseling and advising services are in place, but services may not be reaching all students.	All students receive comprehensive counseling and advising for both college and career. Postsecondary plans for both college and career are	• *Counseling and advising schedules* • *Counselor and advisor job descriptions (counseling program*

		counseling and advising in college and career development. Students may have a postsecondary plan for college and/or career but it is not regularly reviewed.	Students have postsecondary plans for college and/or career that are reviewed annually when scheduling coursework for the next year.	developed and reviewed often for scheduling as well as meeting academic and college and career benchmarks. There are robust and active systems and structures in place to ensure all students receive high-quality counseling and advising services.	*management agreement)* • *Individualized college and career plans* • *Plan/framework for counseling and advising* • *Counseling materials*

EMPLOYER ENGAGEMENT

	Criterion	Initiating	Developing	Demonstrating	*Sample Evidence Examples*
Outreach to Employers	*Relationship Management*	Schools and districts manage most relationships with employers and take on the work of securing WBL opportunities and placements. This work takes place in silos and does not have a regional approach.	Regionally, some schools and districts tap into WBL opportunities and placements directly with employers, while other schools and districts hold relationships directly with employers, but industry engagement/outreach happens from many organizations without clear alignment.	Regionally, an organization or process supports schools and districts to tap into WBL opportunities and placements via a clear delivery system. School and district requests to industry partnerships are clear and provide a mutually beneficial opportunity.	• *Communications materials* • *Documentation of activities* • *Documentation operating procedures* • *Employer rosters*
	Framework for Employer Engagement	A framework for employer engagement and documented agreements are in development.	A framework for employer engagement and related working agreements are in place but not necessarily in use. Expectations, roles, and procedures for working collaboratively may not be clear.	A framework for employer engagement and working agreements among stakeholders are documented and in use. Expectations, roles, and procedures for working collaboratively are clear.	• *Employer engagement framework/plan* • *MOUs* • *Meeting agendas/notes* • *Documented operating procedures*
	Active Relationships	Very few supporting relationships exist to help with specific functions toward implementing and sustaining a pathways framework.	Relationship needs have been assessed and existing relationships are helping to expand a network to meet the needs on a small scale.	Supportive relationships exist for all areas of need that support students along the whole pathway. Industry partnerships provide leadership in the regional efforts.	• *List of partners with description of services provided* • *Budgets* • *MOUs* • *Meeting agendas/notes*

	Criterion	Initiating	Developing	Demonstrating	*Sample Evidence Examples*
Role of Employers	*Advocacy*	There are no clear pathways champions from business, industry, or community organizations advocating for 7-14/16 pathways in targeted sectors.	Representatives from business, industry, and community organizations serve as pathway champions in private settings.	Representatives from business, industry, and community organizations serve as easily identifiable and public pathway champions.	• *Communications materials* • *Talking points* • *Presentations*
	Advising	There are no clear pathways champions from business, industry, or community organizations advising program alignment or development in targeted sectors.	Representatives from business, industry, and community organizations serve as pathway partners but advising may be limited to either secondary or postsecondary and little connection that support a 7-14/16 pathway framework.	Representatives from business, industry, and community organizations serve as easily identifiable and public pathway champions and provide industry information and perspective to better prepare students for work opportunities.	• *Curriculum/programs vetted by industry* • *Programs alignment to industry* • *Industry led initiatives*
	Assistance	There are no clear pathways champions from business, industry, or community organizations providing work-based learning experiences in targeted sectors.	Representatives from business, industry, and community organizations serve as pathway champions in private settings for activities and learning.	Representatives from business, industry, and community organizations serve as easily identifiable and public pathway champions providing activities for learning on a regional level.	• *MOU* • *Letters of support* • *Documented activities and events*

INTERMEDIARIES

	Criterion	Initiating	Developing	Demonstrating	*Sample Evidence Examples*
Convening Functions	*Leadership*	Key stakeholders have not been fully identified and/or gaps exist in partnerships that could prohibit the growth of the initiative.	The roles and responsibilities of key partnering organizations are clear, but such roles and responsibilities are only somewhat fulfilled.	Key partners have clear roles and responsibilities, and leaders of intermediaries ensure such roles and responsibilities are fulfilled. Every partner has ownership.	• *Organizational chart* • *Meeting agendas/notes* • *Documented operating procedures* • *MOUs*
	Convening	There is currently no convening intermediary, and no other mechanism for convening stakeholders is in place.	An intermediary convenes stakeholders and a strategic plan is currently in progress but not complete.	An intermediary convenes stakeholders regularly. A regional strategic plan has been put in place and the convenings are based around the plan, working toward the goals outlined in the plan, and assessing progress.	• *Calendars* • *Meeting agendas/notes* • *Strategic plan* • *SMART Goals* • *Project plans*
	Working regionally	There are few, if any, agreements and processes for aligning and coordinating pathways between counties in a region. There is no entity that facilitates working across districts with regional employers.	An intermediary has some agreements and processes in use for aligning and coordinating pathways with partners within a region. There is little alignment and/or coordination between districts and regional employers.	An intermediary has established agreements and processes for aligning and coordinating pathways with partners throughout a region. Agreements and processes are in use, and there is clear alignment and coordination between districts and regional employers.	• *MOUs* • *Documented operating procedures* • *Meeting agendas/notes* • *Organizational chart*

	Criterion	Initiating	Developing	Demonstrating	*Sample Evidence Examples*
Leadership/ Strategic Planning	*Strategic Plan*	A plan for implementation of a regional pathways initiative is in development.	A plan for implementation of pathways is in place but goals may not be specific, measurable, achievable, results-focused and time-bound or be supported from all partnering agencies or organizations.	A plan for implementation of pathways is in place and implementation is on schedule. Stakeholders support and promote the strategic plan. The strategic plan is reflective of shared community interest of all stakeholders and all goals are specific, measurable, achievable, results-focused and time-bound.	• *Strategic plan* • *Meeting agendas/notes*
	Vision	A vision for pathways is currently in development.	The vision varies by leader or is unclear among leaders of the pathways initiative.	There is a clear and common vision among leaders of the pathways initiative. There is a clear definition of success for the pathways program and students who complete the pathway.	• *Communications materials* • *Strategic plan*
	Sustainability	A strategic plan for sustainability is currently in development. Local pathways initiatives rely on grant or state level seed funding to continue the work.	There is a strategic plan in place to ensure career pathways are sustainable. Local dollars are supporting the pathways work, but the majority of funding is from grants or seed funds.	There is a clear strategic plan in place to ensure career pathways are locally sustainable. The plan includes strategies for funding, partnerships, staffing, expansion, and leadership, and local funding stream(s) have been identified and/or braided to support the local initiative.	• *Strategic plan* • *Budgets* • *Contracts* • *MOUs*

Appendix Item 4: Needs Assessment Framework

Career Readiness Initiative Needs Assessment Resource

Overview

All states participating in the Career Readiness Initiative (CRI) have demonstrated a deep commitment to transforming their systems of career preparation through cross-sector partnerships aimed at achieving six key objectives, each of which is clearly defined in the pages below. To accomplish this, states will undertake an intensive diagnostic assessment of their current career preparation system to identify strengths and gaps that will inform a comprehensive, three-year career readiness action plan. This analysis must examine states' relevant policies, funding mechanisms, delivery systems, and infrastructure and uncover evidence to support its conclusions.

Purpose of this CRI Needs Assessment Resource

To help states effectively prepare for this intensive assessment, the national project partners – CCSSO, ESG, and Advance CTE – have developed this tool that unpacks the content expectations for the work. ***It is intended to help the experts who will lead states' analyses by offering parameters for their scope of work***. Those experts are able to use this tool in whole, in part, or choose another approach altogether. But no matter the methodology they select, their findings must be expressed in a way that clearly identifies how their states measure up against the criteria described below.

It is important to note that states are at different starting points in this work. Several have completed rigorous assessments at the hands of strong partners (e.g. SREB and JFF). Others reflected on the status of several of the key objectives as part of the early work of the CRI. For others, delving into this examination will be a new challenge altogether. ***All states should review the content expectations below, determine which areas within their system have not already been adequately assessed, and design a strategy for examining those outstanding areas***.

Understanding the Components of this Needs Assessment Resource

The six key objectives of this work (i.e. three from the original CRI and three that are new) have been unpacked below into specific targeted outcomes that each state will endeavor to reach. Those outcomes are further defined through "supporting criteria" that will help states both assess the current status of their policies and practices, and think more clearly and specifically about what they seek to accomplish through the work ahead. For each of the targeted outcomes, states may use the supporting criteria to assess their policies and practices using a 1-4 rating scale:

- **1 = Limited Progress**: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.
- **2 = Emerging Practice**: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.
- **3 =Established Practice**: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.
- **4 = Sustained Practice**: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Below the rating scale, space has been provided for states to describe evidence for their ratings, identify key challenges and gaps (chosen from the supporting criteria) that they will prioritize in their career readiness action plans, and specify the different capacity they bring to the work through cross-sector partnerships, policies, and various resources available to them. States can of course add more pages as necessary to provide complete information in those categories. Coaches assigned to state teams will help states design and execute their needs assessment plans to paint a clear, reliable picture of the strengths and gaps of states' career preparation systems.

Career Readiness Initiative Needs Assessment Resource

Key Objective 1: Employer Engagement

Establish employer-driven processes informed by real-time, projected, and other labor market information (LMI) to determine high-skill, high-demand industry sectors with which career pathways and their associated credentials must be aligned.

Targeted Outcomes

1a. **Identifying high-skill, high-demand sectors:** The state and employer community create a structured and dynamic process that uses current and projected LMI to identify high-skill, high-demand sectors and occupations where career pathways should be prioritized and scaled.

1b. **Aligning skills and competencies with labor market:** Formalize and sustain an employer-led, sector-based process to identify the academic knowledge, technical and employability skills required by each priority sector to ensure career pathways and programs are aligned with industry needs.

1c. **Dynamic review process:** Create and support a cross-sector process and feedback loop to review the impact of career pathways to inform their continuous improvement.

Supporting Criteria

(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)

Targeted outcome 1a: Identifying high-skill, high-demand sectors

1. A formalized statewide structure or process is in place that regularly convenes the K-12, postsecondary education, employer and workforce development communities to review labor market information and establish priorities for career pathways.
2. The structure or process is established in law or through an inter-governmental agreement to be sustained across leadership transitions.
3. The structure or process uses reliable LMI to inform classification of industries that are high-skill, high-demand.
4. It identifies statewide priorities for in-demand pathways and credentials while allowing for regional differentiation based on local economic needs.
5. The results of the process are used to inform state policy around access to career pathways, program approval, and funding such that programs that lead to credentials in high-skill, high-demand industries get prioritized.

Targeted outcome 1b: Aligning skills and competencies with the labor market

1. Employers lead a process in specific industries and/or regions in the state through which they identify the academic knowledge, technical skills, and employability skills needed for all students in each priority sector/pathway.
2. Those successful examples are being used as models for scaling and replication across the state.
3. The skills and competencies have been embedded in pathways that begin in secondary school.
4. The skills and competencies are being validated by employers through a formal process that's recognized and respected by business and industry.

Targeted Outcome 1c: Dynamic review process

1. Current/projected labor market needs are continually assessed; adjustments are made to the classification of industries as high-skill, high-demand.
2. New policies are adopted and existing policies and internal structures are adjusted to remove barriers and facilitate the successful development and implementation of state career pathways that culminate in meaningful credentials.
3. There is an inter-governmental process, agreement, or structure that facilitates the review and publication of data, especially related to career pathway participants' progress and success in earning credentials with labor market value.
4. A consistent set of shared measures is used to determine the impact of its pathways on labor market outcomes.

Current Status

Outcome 1a:	□ 1	□ 2	□ 3	□ 4	Outcome 1b:	□ 1	□ 2	□ 3	□ 4	Outcome 1c:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 1:	Capacity of the State to Deliver
	(e.g. We have a process for using LMI to identify high-skill, high-demand sectors, but it is not employer-led.)	

Career Readiness Initiative Needs Assessment Resource

Key Objective 2: Rigor and Quality in Career Pathways for ALL Students

Use policy and funding levers to improve the quality and rigor of career pathways - including scaling down or phasing out those that don't lead to credentials with labor market value - and make those pathways widely available to and accessed by all students in all secondary settings, especially in underserved populations

Targeted Outcomes

2a. **Quality and rigor in pathways:** Policies and processes are in place to ensure all career pathways endorsed by the state develop the core academic knowledge, technical skills, and employability skills students need to be successful in college and the 21st century work place.

2b. **Equity and access in rigorous pathways:** Policy and funding levers to expand and equalize access to high-quality career pathways for **all** students are in place and fully utilized.

Supporting Criteria

(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)

Targeted outcome 2a: Quality and rigor in pathways

1. All course/pathway standards include the academic knowledge, technical skills, and employability skills identified by employers as necessary for entry-level success in current and projected high-skill, high-demand sectors.
2. All career pathways begin broadly, focusing on career awareness and exposure; progress to more occupationally-specific courses; and offer multiple entry and exit points to enable students to change paths as their interests and goals evolve.
3. State policies and incentives help districts and schools recruit industry professionals with sought-after technical knowledge and skills and demonstrated teaching ability.
4. The state removes policy barriers and streamlines certification procedures to make teaching more attractive to such candidates.
5. Professional development opportunities and incentives enable core academic and career-technical teachers to earn credentials in high-skill, high-demand fields and strengthen their instructional practices in related pathways.
6. Secondary and postsecondary program approval criteria are leveraged to establish and maintain career pathway quality, instructional rigor, and connection with priority industry needs.
7. In the past three years, the state has discontinued career pathways that fail to meet minimum standards for quality, rigor, and cross-education alignment, or that do not demonstrate a connection to priority industry needs.

Targeted outcome 2b: Equity and access in pathways

1. A range of high quality delivery models are offered throughout the state so that high-quality, rigorous pathways are widely available to **all** students in **all** secondary settings.
2. Policies and strategies to ensure that access to and completion of pathways programs is equitable across student subpopulations, (e.g. by gender, race/ethnicity, SES, and geographic area) are in place.

Current Status

Outcome 2a:	□ 1	□ 2	□ 3	□ 4		Outcome 2b:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 2:	Capacity of the State to Deliver
	(e.g. We use program approval criteria for new programs but do not use such criteria to retire programs that don't meet standards.)	

Career Readiness Initiative Needs Assessment Resource

Key Objective 3: Career-Focused Accountability Systems

Incorporate robust career-focused indicators in state K-12 accountability systems that measure and value successful completion of high-quality career pathways, attainment of credentials with labor market value, participation in work-based learning, and enrollment in postsecondary education or apprenticeships.

Targeted Outcomes

3a. Career-focused indicators publicly reported: The state collects and publicly reports a robust set of career-focused indicators that measure and value student access and equity within career pathways.

3b. Career-focused indicators have accountability weight: The state has incorporated a robust set of career-focused indicators into its K-12 accountability system that count towards school and district accountability metrics.

3c. Student recognitions and incentives for developing and demonstrating career readiness: Secondary students are recognized and rewarded for developing and demonstrating career readiness.

Supporting Criteria

(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)

Targeted outcome 3a: Career-focused indicators

1. The state collects and reports meaningful career-focused indicators as described in the NSFY Grant Guidelines:
   - The number and percentage of **all** students with access to career pathways in high-skill, high-demand sectors (analyzed by subgroup)
   - The number and percentage of **all** students who complete career pathways in high-skill, high-demand sectors (analyzed by subgroup)
   - Number and percent of **all** students who earn college credit that transfers to a higher education institution (analyzed by subgroup)
   - Number and percentage of **all** students who earn industry-recognized credentials in high-skill, high-demand sectors (analyzed by subgroup)
   - Number and percentage of **all** graduates who secure employment in high-skill, high-demand sectors within 12 months after high school graduation (analyzed by subgroup)
2. The state reviews its collection of career-focused indicators annually to ensure equitable treatment of different student populations.

Targeted outcome 3b: Indicators have weight

1. At least one of the publicly-reported career-focused indicators is included in the state's accountability system used to measure school improvement, in addition to other state-defined career-ready indicators.
2. Postsecondary educators, employers, workforce development leaders, and other key stakeholders provide input on the indicators used to assess students' career readiness to ensure that they are aligned with the needs of the postsecondary communities.

Targeted outcome 3c: Student recognitions and incentives for developing and demonstrating career readiness

1. A range of opportunities for students to demonstrate career readiness is in place– such as industry-recognized credentials, work-based learning, and CTE endorsements - that count for academic credit.
2. Diploma endorsements are offered that provide extra recognition to students for fulfilling the requirements of high-skill, high-demand career pathways, including earning credentials of value.
3. The state's graduation rule requires students' demonstration of career readiness.

Current Status

Outcome 3a:	□ 1	□ 2	□ 3	□ 4	Outcome 3b:	□ 1	□ 2	□ 3	□ 4	Outcome 3c:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 3:	Capacity of the State to Deliver
	(e.g. We collect/analyze several career readiness indicators but do not include them in our accountability system.)	

Career Readiness Initiative Needs Assessment Resource

Key Objective 4: Scaled Pathways that Culminate in Credentials of Value

Working with local districts, scale career pathways that span secondary and postsecondary systems, offer focused career guidance and advisement, blend rigorous and engaging core academic and career-technical instruction, include high-quality work-based learning experiences, and culminate in postsecondary or industry credentials of value

Targeted Outcomes

4a. **Scale high-quality career pathways:** Develop and execute strategies to scale career pathways that connect students to postsecondary education and career opportunities in high-skill, high-demand sectors.

4b. **Expand career guidance systems and work-based learning opportunities:** Ensure that evidence-based career advisement systems and demand-driven work-based learning opportunities are integral components of career pathways that connect classroom learning with the work place.

4c. **Credentials have value:** Adopt and operationalize policies that require career pathways to culminate in postsecondary degrees or validated credentials with labor market value.

Supporting Criteria

(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)

Targeted outcome 4a: Scale high-quality pathways

1. A wide range of secondary settings – i.e. comprehensive high schools, career academies, technology centers, higher education institutions – is utilized effectively and efficiently to offer pathways in high-skill, high-demand sectors to **all** secondary students, but especially in underserved communities.
2. Virtual coursework opportunities are offered to students throughout the state, but especially in rural communities, to provide rigorous, integrated academic and technical instruction as part of a career pathway experience in high-skill, high-demand sectors.
3. Funding and program approval processes are used to scale up pathways in high-skill, high-demand sectors.
4. Funding and program approval processes are used to scale down or phase out pathways that don't lead to credentials of value.

Targeted outcome 4b: Expand work-based learning and career guidance systems

1. Evidence-based, scalable career advisement models have taken root in regions across the state to help **all** students - beginning in middle school - make sound, well-informed decisions about course and pathway participation.
2. On-site and virtual/simulated work-based learning experiences are an integral component of pathways aligned with high-skill, high-demand industry sector needs for **all** students.
3. Work-based learning opportunities progress from awareness and exploration to preparation and training to give students insight into the range of careers available and associated entry requirements to help make informed choices about long-term goals.
4. Work-based learning experiences include authentic assessments of the experience by employers.
5. There is strong alignment between work-based learning opportunities, secondary curriculum, and prioritized industry sector needs.

Targeted outcome 4c: Credentials have value

1. A cross-sector process led by employers is established and used to identify industry credentials with labor market value attained through pathways.
2. Pathway completers earn postsecondary degrees and industry-recognized credentials that are "stackable" and articulate to progressively higher-level credentials, certifications, or degrees.
3. Secondary students have access to college coursework (dual enrollment) as part of pathways to earn credit toward degrees with labor market value.
4. Systemic articulation agreements between secondary and postsecondary are in place to award credit to high school students who complete college coursework in priority sectors.

Current Status

Outcome 4a:	□ 1	□ 2	□ 3	□ 4	Outcome 4b:	□ 1	□ 2	□ 3	□ 4	Outcome 4c:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 4: *(e.g. We have identified an evidence-based, scalable career advisement model but have not developed a scaling strategy.)*	Capacity of the State to Deliver

Career Readiness Initiative Needs Assessment Resource

Key Objective 5: Align State and Federal Funding Streams

Reorganize and intentionally align state and federal funding streams from education, workforce development, and economic development sources to effectively deliver career-focused programs to all students.

Targeted Outcomes	Supporting Criteria
5a. **Asset Mapping**: All federal, state, and private funding streams are inventoried to find opportunities to better align the state's education and training pipeline in response to the needs of its labor market. 5b. **Braided Funding**: Funding streams are effectively braided at state, regional, and local levels to fully leverage all relevant funding opportunities to implement integrated career pathways.	*(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)* **Targeted outcome 5a:** 1. A comprehensive cataloging of all funding sources (federal, state, private) that can be utilized for education, career training, and workforce development purposes – i.e. asset mapping – has been completed. 2. The results of that mapping are used as a tool to determine overlaps and gaps in state systems with a special focus on identifying areas with inequitable student access. 3. A plan has been developed and implemented to address overlaps and gaps to better align the state system and more effectively prepare **all** secondary students for postsecondary success in high-skill, high-demand sectors. **Targeted outcome 5b:** 1. Federal, state, and private funding sources are aligned and leveraged to support the development, implementation, and on-going improvement of high-quality career pathways. 2. Funding streams are braided not only to strengthen the quality of career pathways but also to increase student access to those pathways. 3. Barriers to braiding all funding sources have been identified, and strategies are in place to overcome them.

Current Status

Outcome 5a:	□ 1	□ 2	□ 3	□ 4		Outcome 5b:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 5:	Capacity of the State to Deliver
	(e.g. We have catalogued all relevant funding sources, but we have not developed a corresponding alignment strategy.)	

Career Readiness Initiative Needs Assessment Resource

Key Objective 6: Ensure Cross-Institutional Alignment

Foster greater collaboration between K-12 and postsecondary systems to adopt policies and processes in schools, technology centers, academies, and institutions of higher education to ensure cross-institutional alignment of programs and pathways that smooth transitions for students and minimize institutional barriers.

Targeted Outcomes

6a. **Mapping the career preparation delivery system:** All parts of the delivery system – comprehensive high schools, technology centers, career academies, postsecondary institutions – are mapped to identify redundancies, inefficiencies, and misalignments, as well as best practices.

6b. **Aligning the career preparation delivery system:** The various components of the delivery system are aligned and function synergistically to provide a seamless pathway to career preparation.

Supporting Criteria

(Please circle or highlight the criteria below that represent gap areas on which the state needs to work.)

Targeted outcome 6a:

1. There is an overall vision for the delivery system that is tightly aligned with current and projected needs of the labor market in high-skill, high-demand industry sectors.
2. The various components of the state's career preparation delivery system have been identified and mapped to determine gaps and overlaps in state career pathways offerings in **all** parts of the state for **all** students.
3. Student demographic information and disaggregated outcome data are analyzed to determine the effectiveness of each part of the state's career preparation system in serving **all** students.
4. Best practices are identified and plans are in place to replicate and scale them across the state.

Targeted outcome 6b:

1. The map of the career preparation delivery system has been used to align disparate parts of the system and enable the system to function effectively and efficiently so that **all** students have access to high-quality career pathways.
2. There is a continuous improvement plan in place that includes on-going analysis of all the disparate parts of the delivery system to ensure that they function synergistically to better prepare secondary students for employment opportunities in high-skill, high-demand sectors.

Current Status

Outcome 6a:	□ 1	□ 2	□ 3	□ 4		Outcome 6b:	□ 1	□ 2	□ 3	□ 4

1 = Limited Progress: This outcome is not yet a priority within the state. There is very little activity and no significant effort to address this outcome yet.

2 = Emerging Practice: This outcome is becoming a priority for the state. Early work has been done within the state to lay a foundation to reach this outcome.

3 =Established Practice: This outcome is a priority for the state. Policies have been adopted and work is being implemented across the state that can be strengthened and scaled.

4 = Sustained Practice: The state has fully met this outcome. Policies have taken root; programs have been scaled; systems are sustainable; and no major work is needed.

Evidence for Ratings Above:	Key Challenges and Gaps for Objective 6:	Capacity of the State to Deliver
	(e.g. We have an overall vision for our delivery system, but we have not mapped or aligned the various parts of it.)	

Appendix Item 5: Tennessee NSFY Data Analysis Report

NSFY Phase II Grant: Data Analysis

Introduction

As part of NSFY Phase I grant activities, Tennessee analyzed data on the 2013-14, 2014-15, and 2015-16 academic years to gain a better understanding of trends in student access, equity and completion of K-16 education-to-career learning pathways across student subgroups, with a specific focus on trends aligned with the state's priority industry sectors.

In partnership with the TN departments of Economic and Community Development (TECD) and of Labor and Workforce Development (TLWD) and Education (TDOE), Pathways TN has identified **advanced manufacturing**, **healthcare**, and **information technology** as the top three priority industry sectors for continued growth and expansion across the state. These sectors are represented through three of 16 career clusters promoted by TDOE as education-to-career learning pathways across the state. These fields are growing rapidly in Tennessee and offer mid- to high-wage, high demand positions that require a high degree of skill and educational attainment.

Over the course of these three academic years, Tennessee saw increases in (1) the percentage of secondary students with access to CTE programs of study in these three career clusters, and (2) the number of secondary students enrolled in the programs of study. While at the same time, the number and percentage of secondary students earning early postsecondary credit through dual enrollment or statewide dual credit remained flat from 2013-14 to 2014-15 (complete data for 2015-16 were not available yet for this analysis). Additionally, the number and percentage of secondary students enrolling in postsecondary education varied by only a few percentage points during this time.

Although the data show improvement across all student subgroups for nearly every indicator, there remains persistent structural inequities and achievement gaps, particularly for students who are African American (AA), Hispanic, or economically disadvantaged. The trends are more acute for AA students, who consistently show lower enrollment than their peers in (1) secondary CTE programs of study and (2) postsecondary programs leading to credentials. Both of which are reflected in the low employment rates for AA students in the three priority industry sectors.

The data also show interesting disparities across gender. Female students earn early postsecondary credit at nearly twice the rate of their male peers. Furthermore, female students enroll in postsecondary and gain employment in high-demand sectors within twelve months of high school graduation at higher rates than males.

Throughout this section, the data and accompanying analysis further underscore the state's commitment to address inequities in student access and achievement across all student subgroups and to achieve our goal of ensuring that "*all students are provided equitable access to high-quality, vertically aligned K-16 learning pathways that are reflective of, and linked to, local, regional, and state economic and labor market needs"* by 2020.

REQUIRED INDICATOR 1: ACCESS TO HIGH-QUALITY EDUCATION-TO-CAREER PATHWAYS

While high quality K-16 education-to-career learning pathways include various structures to support the development of students' academic, technical, and employability skills, there are four components that are specifically related to the development of career-specific knowledge and skills at the high school level:

1. Secondary CTE program of study consisting of at least three sequential courses.
2. Capstone work-based learning experience aligned to the program of study.
3. Industry certification aligned to the program of study.
4. Postsecondary instructional program aligned to the program of study.

CTE programs of study approved by the TDOE include each of these four components. To analyze access to learning pathways in priority industry sectors across the state, TDOE analyzed which high schools offered at least one program of study in at least one of the priority career clusters over the past three academic years. All students enrolled in these high schools are considered to have access to a high quality education-to-career learning pathway, though we recognize that the quality of implementation of these pathways will require additional metrics and analysis.

NSFY Phase II Grant: Data Analysis

A growing share of students across Tennessee have access to an education-to-career learning pathway in high school, with 83.5% of students enrolled in a high school offering at least one program of study in a priority industry sector in 2015-16.

Access to high quality education-to-career learning pathways						
School Year	All Students		Female		Male	
	#	%	#	%	#	%
2013-14	189,846	74.6	92,817	74.6	97,021	74.9
2014-15	198,323	77.7	96,728	77.6	101,594	77.8
2015-16	214,056	83.5	104,127	83.2	109,928	83.8

Access to learning pathway by subgroup

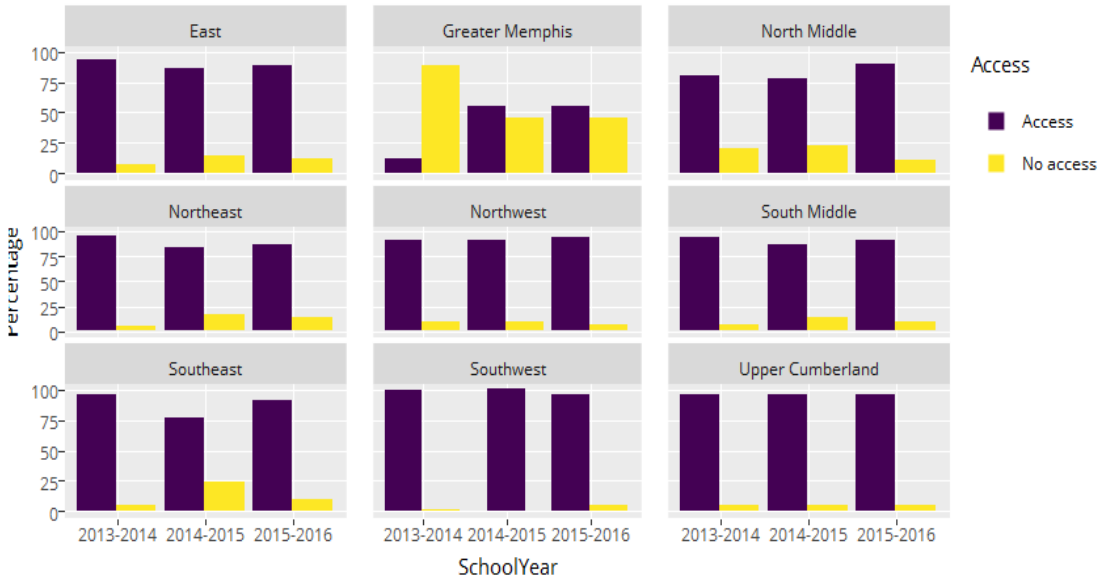
There is no discernible difference in access to high-quality learning pathways in key sectors by gender or disability. While accessibility gaps by racial subgroups have narrowed over the past three years, there is a persistent accessibility gap for African American students. In spite of an overall trend toward greater accessibility of education-to-career pathways for all students across the state, there remains a persistent access gap between economically disadvantaged (ED) students and students who are not economically disadvantaged (non -ED).

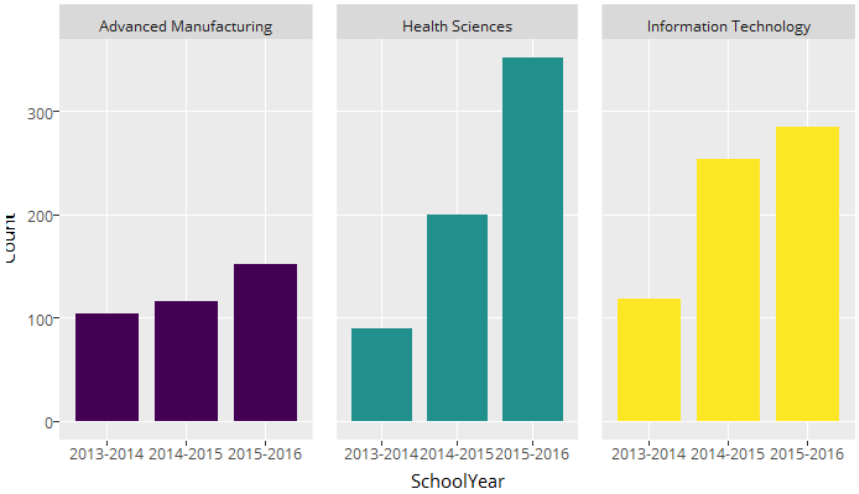
Access to high quality education-to-career learning pathways								
School Year	ED		Non-ED		Students with Disabilities		Students with no disabilities	
	#	%	#	%	#	%	#	%
2013-14	90,870	69.8	98,976	79.7	21,375	74.3	168,471	74.6
2014-15	93,425	71.6	104,898	84.1	23,148	76.8	175,175	77.8
2015-16	102,322	78.6	111,734	88.6	25,537	83.4	188,519	83.6

Access to high quality education-to-career learning pathways												
School Year	African American		Asian		Caucasian		Hispanic or Latino		Native American		Native Hawaiian or Pacific Islander	
	#	%	#	%	#	%	#	%	#	%	#	%
2013-14	25,366	40.2	2408	60.4	150,730	88.0	9,624	69.9	113	83.1	*	*
2014-15	34,612	54.3	3431	73.8	148,283	87.0	10,950	71.5	726	83.5	*	*
2015-16	38,592	62.0	4237	85.9	155,426	91.2	14,635	84.8	796	89.0	358	90.2

Access to learning pathways by Pathways TN region

Geographic disaggregation of the data shows that the majority of gains in access to learning pathways aligned with the three priority industry sectors has been concentrated in the Greater Memphis and North Middle regions of the state.





REQUIRED INDICATOR 2: LEARNING PATHWAY COMPLETION

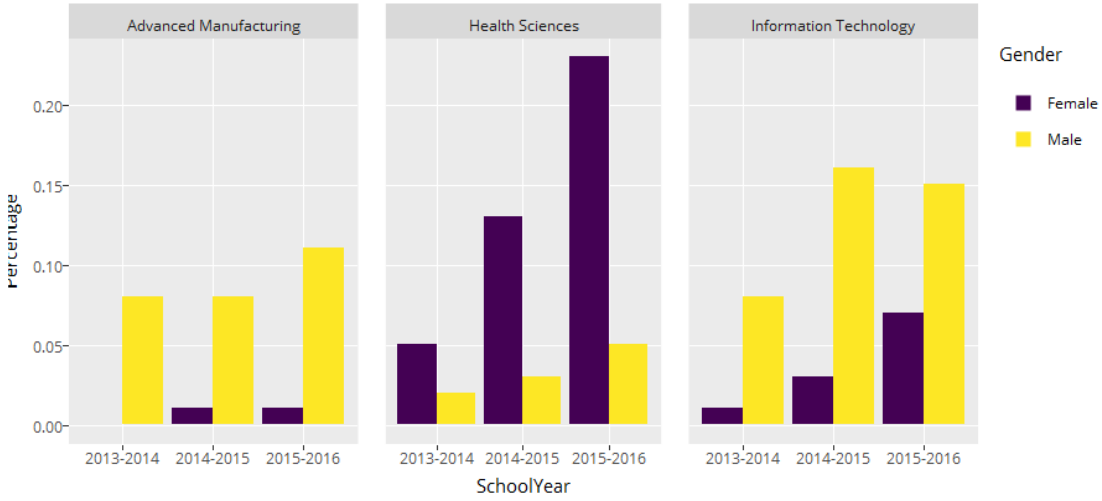
For the purpose of this data analysis, learning pathway completion is defined as a student earning three credits and completing a work-based learning capstone in a program of study within a career cluster aligned with a priority industry sector. The number of students across the state who have completed an education-to-career learning pathway in advanced manufacturing, health science, or information technology has grown significantly from 314 in 2013-14 to 791 in 2015-16, an increase of 150%.

Most of the growth in the number of students completing learning pathways in priority sectors over the past three years has been concentrated in Health Science and Information Technology. Growth in Advanced Manufacturing has been modest during this period. Anecdotal evidence suggests that the variation in learning pathway completion across priority industry sectors and subgroups may be highly influenced by barriers (real or perceived) related to students successfully accessing certain capstone WBL experiences.

Completion of high priority education-to-career learning pathways						
School Year	All Students		Female		Male	
	#	%	#	%	#	%
2013-14	314	0.1	91	0.1	223	0.2
2014-15	570	0.2	212	0.2	358	0.3
2015-16	791	0.3	377	0.3	414	0.3

Learning pathway completion by gender

The gap between male and female students completing high-demand pathways in high school has narrowed over the past three school years. While access and completion of programs of study and work-based learning in high-priority sectors is similar for male and female students across the state, enrollment and completion of pathways in specific industry sectors is highly gendered.



Completion of high priority education-to-career learning pathways						
School Year	African American		Caucasian		Hispanic or Latino	
	#	%	#	%	#	%
2013-14	14	0.0	277	0.2	*	*
2014-15	77	0.1	449	0.3	25	0.2
2015-16	123	0.2	655	0.4	*	*

Learning pathway completion by race

Tennessee is concerned about the small number and percentage of minority students completing pathways in priority industry areas. TDOE is exploring strategies to address the persistent achievement gap between Caucasian students and students from other race subgroups. *The n-count of some race subgroups (Native American and Native Hawaiian or Pacific Islander) did not exceed the TDOE's small-cell suppression threshold (n=10) for public reporting. The n-count for Hispanic students only exceeded this threshold in the 2014-15 school year.

Learning pathway completion by economic disadvantage

Though Tennessee has experienced strong growth in the number and percentage of students completing learning pathways in priority industry sectors, the state has also witnessed a widening achievement gap between economically disadvantaged (ED) students and students who are not economically disadvantaged.

Completion of high priority education-to-career learning pathways								
School Year	ED		Non-ED		Students with Disabilities		Students with no disabilities	
	#	%	#	%	#	%	#	%
2013-14	142	0.1	172	0.1	23	0.1	287	0.1
2014-15	222	0.2	348	0.3	36	0.1	530	0.2
2015-16	178	0.1	613	0.5	61	0.2	730	0.3

Learning pathway completion by student disability

The data indicate that in advanced manufacturing and information technology, students with disabilities complete learning pathways at a similar rate to students without a disability.

REQUIRED INDICATOR 3: EARLY POSTSECONDARY ATTAINMENT

From 2013-14 to 2014-15, Tennessee experienced incremental growth in the number and percentage of students earning early postsecondary credit through dual enrollment or statewide dual credit. TDOE utilizes high school course codes to monitor student enrollment in, and access to, early postsecondary coursework and exam opportunities such as AP, IB, dual credit, dual enrollment, Cambridge, etc. In addition to using course codes to monitor enrollment, Tennessee verifies student success in earning postsecondary credits/hours through data sharing agreements with postsecondary institutions and exam vendors (such as industry certifying bodies and the CollegeBoard). Students earn statewide dual credit by passing the specific course's dual credit exam; exam scores are tracked in the Early Postsecondary Data System.

Data on postsecondary credits and/or hours earned through dual enrollment with postsecondary institutions are accessible via the Tennessee Longitudinal Data System (TLDS). These data are available to TDOE after higher education institutions submit their semester files to the Tennessee Higher Education Commission (THEC), which then submits its master file to TLDS, where the data are run through a matching algorithm to longitudinally link new data to existing records. Due to the length of this process, TDOE's view of a semester file is delayed approximately 6-8 months. At the time of this data analysis, TDOE can only report on credits/hours earned through dual enrollment courses through the 2014-15 school year. For consistency, this data analysis of dual enrollment and statewide dual credit is focused solely on the 2013-14 and 2014-15 academic years, and include general education and CTE dual enrollment and statewide dual credit courses.

Early Postsecondary Credits/Hours						
School Year	All Students		Female		Male	
	#	%	#	%	#	%
2013-14	16,684	6.6	10,276	8.3	6,394	4.9
2014-15	17,225	6.7	10,510	8.4	6,700	5.1

Early postsecondary credit by race

The data show a significant achievement gap in percentage of students from racial subgroups earning early postsecondary credit through dual enrollment courses or dual credit opportunities. Asian and Caucasian students earn early postsecondary credit at a much higher rate than their African American and Hispanic peers. There is high variance in the percentage of Native Americans earning early postsecondary credit due to the low n-count of that subgroup.

Early Postsecondary Credits/Hours										
School Year	African American		Asian		Caucasian		Hispanic or Latino		Native American	
	#	%	#	%	#	%	#	%	#	%
2013-14	1398	2.2	347	8.7	14,463	8.4	399	2.9	29	21.3
2014-15	1,448	2.3	336	7.2	14,870	8.7	488	3.2	38	4.4

NSFY Phase II Grant: Data Analysis

Early postsecondary credit by economic disadvantage

The data show a wide achievement gap in the percentage of economically disadvantaged students who earn early postsecondary credit through dual enrollment courses or dual credit opportunities.

Early Postsecondary Credits/Hours								
School Year	ED		Non-ED		Students with Disabilities		Students with no disabilities	
	#	%	#	%	#	%	#	%
2013-14	5913	4.5	10,757	8.7	180	0.6	16,490	7.3
2014-15	6420	4.9	10,790	8.6	206	0.7	17,004	7.6

Early postsecondary credit by disability

The data show a wide achievement gap in the percentage of students with a disability who earn early postsecondary credit through dual enrollment courses or dual credit opportunities

Vendor	Certification	Students
ASE	Automatic Transmission & Transaxle	4
	Automobile Service Technology	6
	Brakes	24
	Electrical/Electronic Systems	10
	Engine Performance	9
	Engine Repair	16
	Heating & Air Conditioning	9
	Maintenance & Light Repair	49
	Manual Drive Train & Axles	10
	Nonstructural Analysis & Damage Repair	1
	Painting & Refinishing	1
	Suspension & Steering	13
EPA	EPA Section 608 Type-II Type-III	1
	EPA Section 608 Universal	6
NCCER	Carpentry Level One: Fundamentals	19
	Core Curriculum	154
	Core Curriculum	1
	Core Curriculum: Introductory Craft Skills	3
	Electrical Level One	15
	Electrical Level Two	8
	HVAC Level One	1
	Pipefitting Level One	1
	Welding Level 1: AWS-SENSE EG2.0 Compliant	12
	Welding Level One	13
	Welding Level Two	19
NIMS	Job Planning, Benchwork, & Layout	2
	Measurement, Materials, & Safety	14
	Milling I	2
	Turning Operations: Turning Chucking Skills	2
Microsoft	77-418: MOS: Microsoft Office Word 2013	155
	77-420: MOS: Microsoft Office Excel 2013	42
	77-422: MOS: Microsoft Office PowerPoint 2013	99
	77-423: MOS: Microsoft Office Outlook 2013	2
	77-424: MOS: Microsoft Office Access 2013	17

REQUIRED INDICATOR 4: INDUSTRY CERTIFICATIONS

	77-425: MOS: Microsoft Office Word 2013 Expert Part 1	7
	77-426: MOS: Microsoft Office Word 2013 Expert Part 2	5
	77-881: MOS: Microsoft Office Word 2010	345
	77-882: MOS: Microsoft Office Excel 2010	153
	77-883: MOS: Microsoft Office PowerPoint 2010	711
	77-884: MOS: Microsoft Office Outlook 2010	1
	77-885: MOS: Microsoft Office Access 2010	33
	77-887: MOS: Microsoft Office Word 2010 Expert	1
	98-375:MTA: HTML5 Application Development Fundamentals	1

Tennessee believes that industry certifications are one of the best measures of student skill and competency attainment. Through statewide agreements, community colleges and the Tennessee Colleges of Applied Technology award students credits or clock hours toward credential and degree programs. These certifications also have immediate value if students choose to enter the workforce directly after high school and/or support themselves while completing postsecondary.

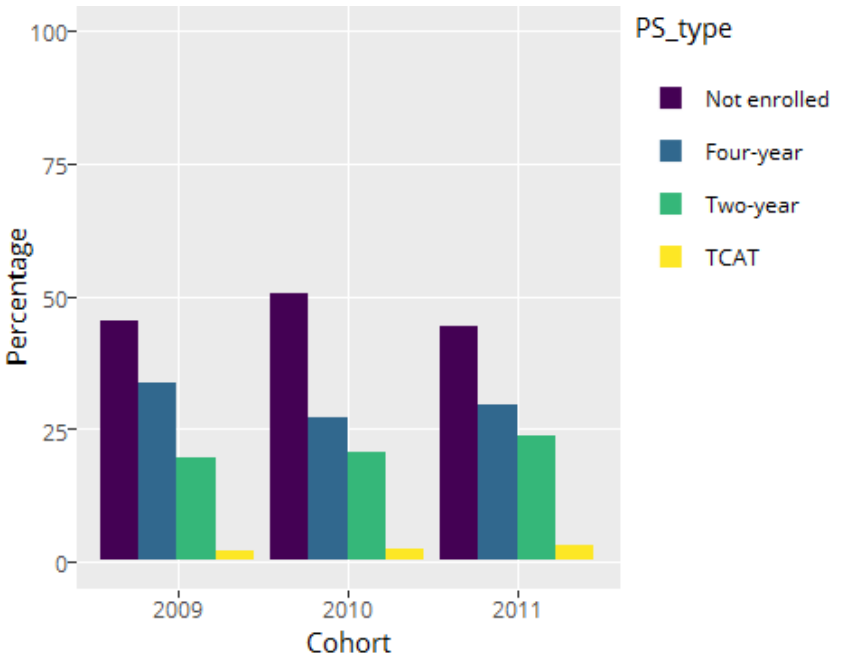
Tennessee is working to become one of the first states to acquire verified data about students who earn industry certifications in high school. Over the past six months, TDOE has developed data sharing agreements with nine out of fifteen vendors that offer 26 of the 39 certifications (67%) valued by industry and promoted by the TDOE. To date, four vendors have supplied data to TDOE, including one that offers certifications in a high-demand sector: the National Institute for Metalworking Skills (NIMS). Over the next six months, TDOE will continue working with the remaining vendors to sign data sharing agreements and begin data flow to support this vital work.

A key challenge in this work is that certification vendors do not track demographic information about the people who take their exams and earn certifications. For this reason, TDOE is not able to analyze subgroups at this time. Over the next year, TDOE will work to develop processes to match official industry certification data to student records held by the TDOE, where possible. TDOE will also collaborate with vendors to explore opportunities where additional data collection at the time of examination could enable more robust and granular reporting on subgroups. Tennessee is at the forefront of collecting verified data on industry certifications, and TDOE is excited to lead the way and share its experience with other states looking to make progress in this area.

The table shows verified numbers of Tennessee students who earned industry certifications during the 2015-16 school year in all industry sectors (not just advanced manufacturing, healthcare, and information technology), noting that this information is not comprehensive and will expand as additional agreements are finalized.

REQUIRED INDICATOR 5: EDUCATION AND EMPLOYMENT AFTER HIGH SCHOOL

The TDOE's current strategic plan, Tennessee Succeeds, prioritizes student outcomes after high school graduation as the primary measure of success for Tennessee schools. This plan aligns with the Drive to 55, an initiative led by the Governor's Office that aims to equip 55% of Tennesseans with a postsecondary credential or degree by 2025. The TLDS links data from the TDOE, THEC, and Tennessee Department of Labor and Workforce Development (TDLWD) to give a long-term view of students' progression through the education system and into the workforce. Interagency data sharing is critical for the state to evaluate the efficacy of its education and training system to prepare young people to find meaningful employment and contribute to the state's prosperity.



Postsecondary enrollment within twelve months of high school graduation

The number and percentage of students enrolling in postsecondary education has varied by only a few percent over the past three years. The 2011 high school freshman cohort is the first to receive the benefits of Tennessee Promise, a statewide program that provides "last dollar" financial aid for up to two years of study at a community college or a Tennessee College of Applied Technology, providing students with a free K-14 education.

Seamless Enrollment in Postsecondary						
Freshman Cohort	All Students		Female		Male	
	#	%	#	%	#	%
2009	38,507	54.9	21,250	61.9	17,257	48.2
2010	34,477	49.6	18,475	54.5	16,002	45.0
2011	38,944	55.7	21,127	62.0	17,817	49.7

Postsecondary enrollment by gender

The data indicate that women are enrolling in postsecondary education at a significantly higher rate than men.

Postsecondary Enrollment by race

The data show significant disparities in postsecondary enrollment for different racial subgroups. The rate of postsecondary-going for Native American and Native Hawaiian or Pacific Islander students shows a positive growth trend. The postsecondary-going rate for Hispanic students has remained relatively flat during this period and is consistently the lowest for all racial subgroups. Postsecondary enrollment for African American students experienced a decline in both the number and percentage of students.

Seamless Enrollment in Postsecondary												
Cohort	African American		Asian		Caucasian		Hispanic or Latino		Native American		Native Hawaiian or Pacific Islander	
	#	%	#	%	#	%	#	%	#	%	#	%
2009	8,633	48.0	837	72.2	27,667	58.7	1,262	35.2	68	41.5	37	44.6
2010	8,087	45.4	737	60.0	24,271	52.3	1,239	33.0	90	42.9	53	54.6
2011	7,921	44.6	892	72.3	28,246	61.0	1,608	39.3	124	55.6	63	57.3

Seamless postsecondary enrollment by economic disadvantage

There is a severe gap in the rate of enrolling in postsecondary education between economically disadvantaged students and students who are not economically disadvantaged.

Seamless Enrollment in Postsecondary								
Cohort	ED		Non-ED		Students with Disabilities		Students with no disabilities	
	#	%	#	%	#	%	#	%
2009	17,026	41.2	21,481	74.5	1,640	22.3	36,867	58.7
2010	16,425	39.7	18,052	64.1	1,710	23.4	32,767	52.7
2011	18,193	42.7	20,751	75.9	1,940	26.8	37,004	59.0

Seamless postsecondary enrollment by disability

There is a wide gap in the rate of enrolling in postsecondary education between students with a disability and students who do not have a disability.

Employment in priority industry sectors within twelve months of high school graduation

TDOE determined employment in high-demand sectors within twelve months of high school graduation using employment data submitted to the TLDS by the TDLWD. TDOE queried the system for students from the 2009, 2010, and 2011 high school freshman cohorts who were employed by companies in high-demand sectors based on the North American Industry Classification System (NAICS). The codes listed in this table were used to determine that an employer was part of a high-demand sector.

Career cluster	NAICS code(s)
Advanced Manufacturing	3100-3300
Health Science	6200
Information Technology	5100, 5415

The limitation of this method for determining employment in high-demand sectors is that it focuses solely on the industry of the company rather than the occupation of the employee. Consequently, this method will dramatically underreport employment in Information Technology, as jobs in this field are distributed across virtually all industries. Because the employment data set submitted by the TDLWD does not include Standard Occupation Classification (SOC) codes, Tennessee is not able to account for students who enter Information Technology roles in other industries.

A second limitation of TDOE's view of employment outcomes is the difficulty of matching K-12 education records with wage records for students who did not enroll in postsecondary education. Many school districts in Tennessee do not report social security numbers to TDOE; while the TDLWD uses social security numbers as the primary identifier for individual records. Since postsecondary institutions collect a variety of demographic information about enrollees and social security numbers, postsecondary records help link K-12 data to wage data. For students who do not pursue postsecondary education, this link cannot be made. In recent years, Tennessee has not been able to account for approximately 40% of K-12 students who did not subsequently enroll in postsecondary education.

At the time of this analysis, employment data for the second quarter of 2016 (April-June) was not yet available, meaning that only nine months of employment data were available for the 2011 cohort. The downward trend in employment for this cohort within twelve months of high school graduation is most likely due to this lack of data.

Employment in priority industry sectors by gender

For these three cohorts, women have obtained employment in priority industry sectors within twelve months of high school graduation at a higher rate than their male counterparts. Considered alongside the disparity between men and women in postsecondary enrollment, young men in Tennessee are increasingly at risk of missing out on the opportunities offered by the state's growing economy.

Employment in Priority Industries within 12 Months of HS Graduation						
Freshman Cohort	All Students		Female		Male	
	#	%	#	%	#	%
2009	6,514	9.3	3,446	10.0	3,068	8.6
2010	6,703	9.6	3,591	10.6	3,112	8.7
2011	5,667	8.1	3,087	9.1	2,580	7.2

Employment in priority industry sectors by race

Employment in Priority Industries within 12 Months of HS Graduation

Cohort	African American		Asian		Caucasian		Hispanic or Latino		Native American	
	#	%	#	%	#	%	#	%	#	%
2009	1148	6.4	54	4.7	5008	10.6	288	8.0	14	8.5
2010	1249	7.0	55	4.5	5091	11.0	285	7.6	17	8.1
2011	999	5.6	58	4.7	4344	9.4	234	5.7	12	5.4

The data show significant disparities in employment in priority industry sectors between racial subgroups. For Asian students, this disparity may be the result of that group's relatively high postsecondary enrollment rate. Likewise, as the postsecondary enrollment rate for Native American students has increased, the employment rate in the identified priority industry sectors has similarly declined. These data show a disparity in employment in priority industry sectors for African American and Hispanic students. The n-count for Native Hawaiian students did not exceed the suppression threshold for this category.

Employment in priority industry sectors by economic disadvantage

The data indicate that ED students gain employment in priority industry sectors within twelve months of high school graduation at a slightly higher rate than their non-ED peers. Given the vast disparity in postsecondary enrollment rates for these two groups, the fact that both groups are gaining employment in these sectors at similar rates is a major point of concern.

Employment in priority industry sectors by disability

The data show that students with a disability gain employment in priority industry sectors within twelve months of high school graduation at a lower rate than peers who do not have a disability.

Employment in Priority Industries within 12 Months of HS Graduation								
Cohort	ED		Non-ED		Students with Disabilities		Students with no disabilities	
	#	%	#	%	#	%	#	%
2009	3834	9.3	2680	9.3	610	8.3	5904	9.4
2010	4125	10.0	2578	9.2	609	8.3	6094	9.8
2011	3709	8.7	1958	7.2	507	7.0	5160	8.2

Conclusion

This data analysis paints a picture of Tennessee that is both promising and sobering. School districts across the state are offering more high-quality education-to-career learning pathways in priority industry sectors, and more students are starting to follow those pathways by completing a program of study and work-based learning capstone experience in high school. At the same time, early postsecondary achievement and enrollment in postsecondary education have remained relatively flat over the past three years. However, notable disparities exist in both access and achievement for certain student subgroups. For Tennessee to accomplish its goal of ensuring that "*all students are provided equitable access to high-quality, vertically aligned K-16 learning pathways that are reflective of, and linked to, local, regional, and state economic and labor market needs*", it must remain focused in pursuing a transformative, systemic change at the state level that permeates down to the regional and local levels.

Definitions

TBR: Tennessee Board of Regents | TCAT: Tennessee College of Applied Technology
TDOE: Tennessee Department of Education | THEC: Tennessee Higher Education Commission
ECD: Economic and Community Development | TLDS: Tennessee Longitudinal Data System

Appendix Item 6: Regional Leads Survey

Regional Capacity Survey

This survey is designed to help assess the career pathways progress and capacity of each regional intermediary to better inform future convenings and professional development opportunities and help direct our ongoing pathways work.

* Required

Regional Capacity

This section seeks your feedback on your capacity and that of your regional steering committee. Providing us your candid feedback will help inform our collective work and support as we move forward together.

1. **Does your regional steering committee have regular meetings?** *
   Mark only one oval.
   - ◯ Yes
   - ◯ No

2. **If yes, how often are your meetings held?**
   _____

3. **What is the average attendance of your regional steering committee meetings?** *
   Mark only one oval.
   - ◯ Less than half of members regularly attend
   - ◯ Between 50-75% of members regularly attend meetings
   - ◯ Between 75-90% of members regularly attend meetings
   - ◯ The large majority of members regularly attend meetings
   - ◯ Other: _____

4. **Check all of the following that have representation regularly attending your steering committee meetings:** *

Check all that apply.

- [ ] Public agency/ public sector- non-education (eg. Mayor's Office)
- [ ] Labor and workforce training
- [ ] Economic development
- [ ] Secondary education
- [ ] Primary education
- [ ] K-12 district
- [ ] Postsecondary education
- [ ] Community college
- [ ] Tennessee College of Applied Technology
- [ ] Private sector employers
- [ ] Chamber of Commerce
- [ ] Sector association
- [ ] Other: _____

5. **Check all of the following that are highly engaged or taking on additional roles within the steering committee:** *

Check all that apply.

- [ ] Public agency/ public sector- non-education (eg. Mayor's Office)
- [ ] Labor and workforce training
- [ ] Economic development
- [ ] Secondary education
- [ ] Primary education
- [ ] K-12 district
- [ ] Postsecondary education
- [ ] Community college
- [ ] Tennessee College of Applied Technology
- [ ] Private sector employers
- [ ] Chamber of Commerce
- [ ] Sector association
- [ ] Other: _____

6. **Describe the roles (formal or informal) of your most highly engaged steering committee members?**

7. **Does your steering committee have subcommittees?** *
Mark only one oval.

- Yes
- No *Skip to question 10.*

Untitled Section

8. **What are the subcommittees?**

9. **Would you describe the subcommittees as functional and/or productive?**
Mark only one oval.

- Yes
- No

Skip to question 11.

Untitled Section

10. **Do you have future plans for including or expanding subcommittees in your region?** *

Skip to question 11.

Untitled Section

11. **Do you have any other future plans for steering committee transitions, restructuring, or adding additional members?**

_____

_____

_____

_____

_____

12. **How equipped do you feel to facilitate regional steering committee meetings?** *

Mark only one oval.

	1	2	3	4	5	
Not very equipped	◯	◯	◯	◯	◯	Very equipped

13. **Check any potential professional development topics you would be interested in to better facilitate regional meetings.** *

Check all that apply.

- [ ] Involving/navigating productive conflict
- [ ] Agenda-building
- [ ] Co-facilitation
- [ ] Engagement strategies
- [ ] Strategic planning
- [ ] Data gathering and analysis
- [ ] Program selection/alignment
- [ ] Project planning
- [ ] Other: _____

14. **How familiar are you with data sources to inform decision-making about career pathways in your regions?** *

Mark only one oval.

	1	2	3	4	5	
Unfamiliar	◯	◯	◯	◯	◯	Very Familiar

15. **Please name the sources you go to for data about career pathways, education, and labor market/workforce information in your region.**

_____

_____

_____

_____

_____

16. **How equipped do you feel you are to conduct data analyses to help make decisions about career pathways implementation in your region?** *

Mark only one oval.

	1	2	3	4	5	
Not very equipped	◯	◯	◯	◯	◯	Very equipped

17. **How equipped do you feel you are to lead a data analysis session for your regional steering committee or a subgroup?** *

Mark only one oval.

	1	2	3	4	5	
Not very equipped	◯	◯	◯	◯	◯	Very equipped

18. **Would you like additional support around data analysis and decision-making?**

Mark only one oval.

- ◯ Yes
- ◯ No

19. **Does your steering committee reflect the diversity of your region's student body in terms of race and gender?** *

Mark only one oval.

- ◯ Yes
- ◯ No

20. **Describe your steering committee's diversity in terms of race, gender, and sector representation.** *

21. **How equipped are you to lead a regional steering committee session on the topic of racial equity and diversity?** *
Mark only one oval.

	1	2	3	4	5	
Not very equipped	◯	◯	◯	◯	◯	Very equipped

22. **How often does your regional steering committee discuss the following issue:** *
Equitable access to high quality programs: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

23. **How often does your regional steering committee discuss the following issue:** *
Racial diversity of student body enrolled in career pathways: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

24. **How often does your regional steering committee discuss the following issue:** *
Gender diversity of student body enrolled in career pathways: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

25. **How often does your regional steering committee discuss the following issue:** *
Socio-economic diversity of student body enrolled in career pathways: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

26. **How often does your regional steering committee discuss the following issue:** *
Students with disabilities enrolled in career pathways: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

27. **How often does your regional steering committee discuss the following issue:** *
Quality level of programming provided to students: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

28. **How often does your regional steering committee discuss the following issue:** *
Employer Engagement Levels: 1 = Never, 2 = Once/twice, 3 = Occasionally, 4 = At most meetings, 5 = At every meeting
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Every Meeting

29. **Our region informally evaluates our Pathways initiative based on the following:** *
Check all that apply.

- [ ] Number of students participating in some aspect of career pathways
- [ ] Number of students completing career pathways programs of study
- [ ] Number of students attaining early postsecondary credits or industry credentials
- [ ] Student grades and test scores who participate in career pathways
- [ ] Student job attainment rates and postsecondary enrollment rates who have participated/completed career pathways
- [ ] Quality of programming provided to students
- [ ] Quality of partnerships in the region
- [ ] Number of employers partnering in the region
- [ ] Buy-in to Pathways Framework among key stakeholders
- [ ] I don't know
- [ ] Other: _____

30. **What other external supports, professional development, or resources would be most helpful to you or your regional steering committee?** *

_____

_____

_____

_____

_____

Skip to question 31.

Region Progress

This section seeks your feedback on how your region is progressing in implementing high-quality career pathways. Your candid answers will help Pathways TN better plan for and support your region.

31. **What grade levels do you primarily focus on for your region's Pathways initiatives?** *
Mark only one oval.

- ◯ Grades K-12
- ◯ Grades 9-12
- ◯ Grades 9-14
- ◯ Grades 7-14
- ◯ Grades 7-14/16
- ◯ Grades K-16
- ◯ Other: _____

32. **Rate the following pathways component in your region.** *

Early Work-based Learning Opportunities (interest surveys, career fairs, etc): 1. Non-existent 2. Needs improvement 3. Steadily improving 4. Above Average 5. Exemplary
Mark only one oval.

	1	2	3	4	5	
Non-existent	◯	◯	◯	◯	◯	Exemplary

33. **Rate the following pathways component in your region.** *

Intermediate Work-based Learning Opportunities (job shadowing, career mentoring, industry exploration, etc): 1. Non-existent 2. Needs improvement 3. Steadily improving 4. Above Average 5. Exemplary
Mark only one oval.

	1	2	3	4	5	
Non-existent	◯	◯	◯	◯	◯	Exemplary

34. **Rate the following pathways component in your region.** *

Culminating Work-based Learning Opportunities (capstone experiences, summer jobs, internships, apprenticeships, etc): 1. Non-existent 2. Needs improvement 3. Steadily improving 4. Above Average 5. Exemplary
Mark only one oval.

	1	2	3	4	5	
Non-existent	◯	◯	◯	◯	◯	Exemplary

35. **Rate the following pathways component in your region.** *

Employer Engagement: 1. Non-existent 2. Needs improvement 3. Steadily improving 4. Above Average 5. Exemplary
Mark only one oval.

	1	2	3	4	5	
Non-Existent	◯	◯	◯	◯	◯	Exemplary

36. **Rate the following pathways component in your region.** *

Career Counseling and Advising: 1. Non-existent 2. Some practices and programs exist in isolation 3. Programs exist for high school only 4. Some disconnected programs exist for middle and high school 5. Career advising occurs along a thoughtful continuum starting no later than grade 7

Mark only one oval.

	1	2	3	4	5	
Non-Existent	◯	◯	◯	◯	◯	Continuum of Advising Programs In Place

37. **Rate the following pathways component in your region.** *

Funding Sources: 1. Completely Unsustainable 2. Mostly grant funded 3. Partially grant funded 4. Diverse and generally recurring 5. Recurring and sustainable

Mark only one oval.

	1	2	3	4	5	
Unsustainable	◯	◯	◯	◯	◯	Recurring and Sustainable

38. **Rate the following pathways component in your region.** *

Quality High School Programs of Study (POS): 1. Non-existent 2. Needs improvement 3. Steadily improving 4. Above Average 5. Exemplary

Mark only one oval.

	1	2	3	4	5	
Non-existent	◯	◯	◯	◯	◯	Exemplary

39. **Rate the following pathways component in your region.** *

Postsecondary Partnerships: 1. None exist 2. A couple supportive institutions 3. Several supportive institutions 4. Several highly engaged institutions 5. All regional institutions are highly engaged

Mark only one oval.

	1	2	3	4	5	
None Exist	◯	◯	◯	◯	◯	All Institutions Highly Engaged

40. **Rate the following pathways component in your region.** *

Early Postsecondary (EPS) Access: 1. Students do not have access to EPS 2. A select few students have access to EPS 3. Half of student have access to EPS 4. Most students have access to EPS 5. All student have access to EPS
Mark only one oval.

	1	2	3	4	5	
No students have access	◯	◯	◯	◯	◯	All students have access

41. **Rate the following pathways component in your region.** *

Secondary to postsecondary alignment: 1. Non-existent 2. Needs improvement 3. Aligned among a few POS 4. Strong alignment among one or more partnering institutions 5. Highly aligned across all POS- seamless transitions for students
Mark only one oval.

	1	2	3	4	5	
Non-existent	◯	◯	◯	◯	◯	Highly aligned

42. **Describe any particular strengths or challenges to your region's secondary to postsecondary alignment.**

43. **Rate the following pathways component in your region.** *

Racial Diversity of Student Participants: 1. Not very diverse 2. Certain programs have some racial diversity 3. Most programs have some racial diversity 4. All programs have some racial diversity 5. Diversity of each program matches regional student demographics
Mark only one oval.

	1	2	3	4	5	
Not very diverse	◯	◯	◯	◯	◯	Diversity matches student demographics

44. **Rate the following pathways component in your region.** *

Gender Diversity of Student Participants 1. Very little gender diversity 2. Certain programs have some gender diversity 3. Most programs have some gender diversity 4. All programs have some gender diversity 5. Gender diversity is split equally across all programs (approximately half female, half male)
Mark only one oval.

	1	2	3	4	5	
Very little gender diversity	◯	◯	◯	◯	◯	Gender diversity is split equally across all programs

45. **Rate the following pathways component in your region.** *

Socio-Economic Diversity of Student Participants: 1. Not very diverse 2. Certain programs have some socio-economic diversity 3. Most programs have some socio-economic diversity 4. All programs have some socio-economic diversity 5. Diversity of each program matches regional student demographics
Mark only one oval.

	1	2	3	4	5	
Not very diverse	◯	◯	◯	◯	◯	Diversity matches student demographics

46. **Check all the boxes that apply in regards to students with disabilities (SWD).** *

Check all that apply.

- ☐ Pathways initiatives are too rigourous for most SWD in our region
- ☐ SWD are excluded from most pathways due to other academic requirements
- ☐ SWD can access only a few select pathways tailored to serve lower level learners
- ☐ SWD are over-represented in all pathways initiatives
- ☐ SWD are over-represented in specific pathways initiatives
- ☐ SWD are under-represented in pathways initiatives
- ☐ SWD participate in pathways initiatives at appropriate rates
- ☐ Other: _____

47. **Rate the following pathways component in your region.** *

Career Pathways Vision: 1. No cohesive vision whatsoever 2. Very little clarity of vision 3. Multiple visions held by stakeholders 4. One vision has been discussed 5. One vision is clear and deeply held by all
Mark only one oval.

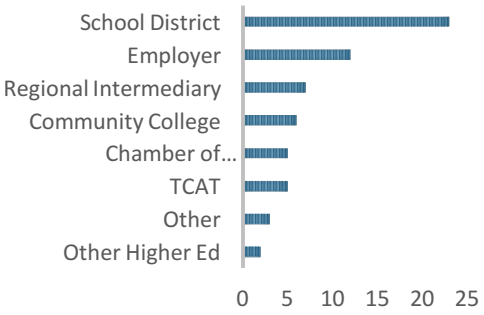
	1	2	3	4	5	
No Cohesive Vision	◯	◯	◯	◯	◯	One Clear, Adopted Vision

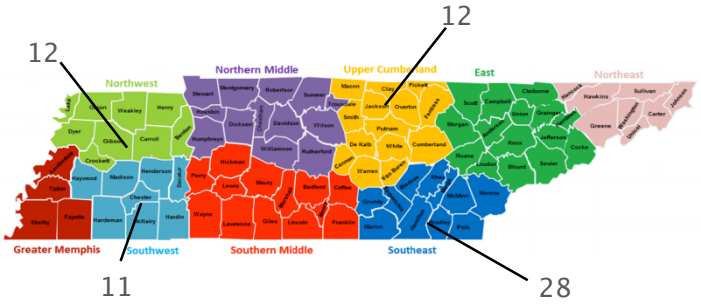
Stop filling out this form.

Appendix Item 7: Focus Group Findings

Pathways Regional Focus Groups
Summer 2016

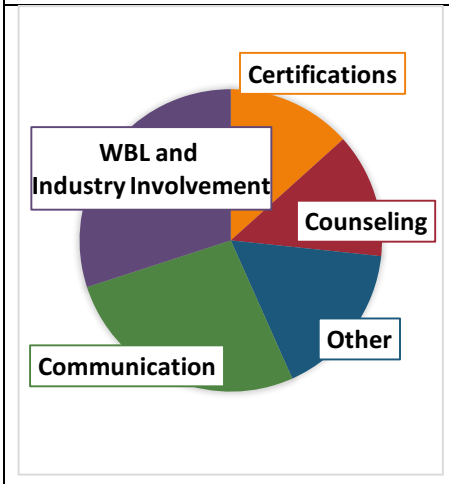
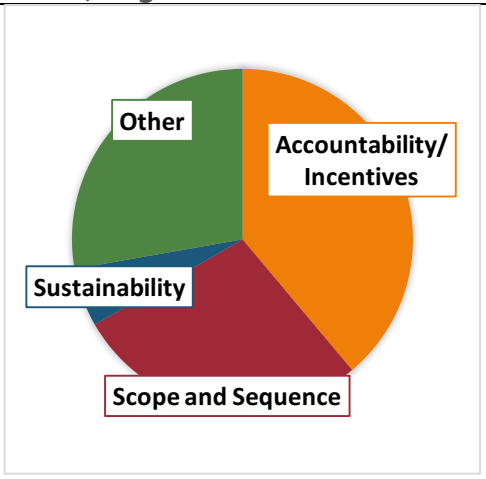
63 Participants from 4 Regions



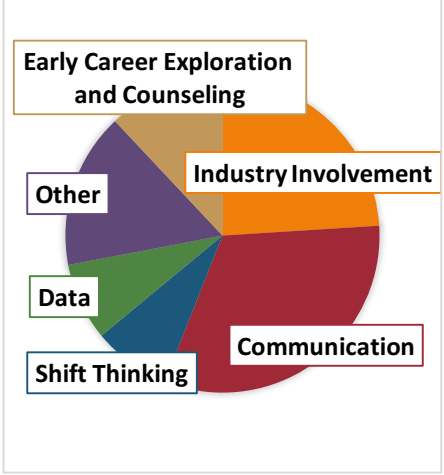
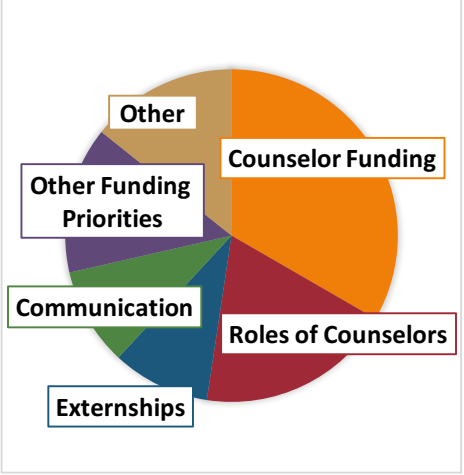


Overview of Findings (see reverse for explanation)

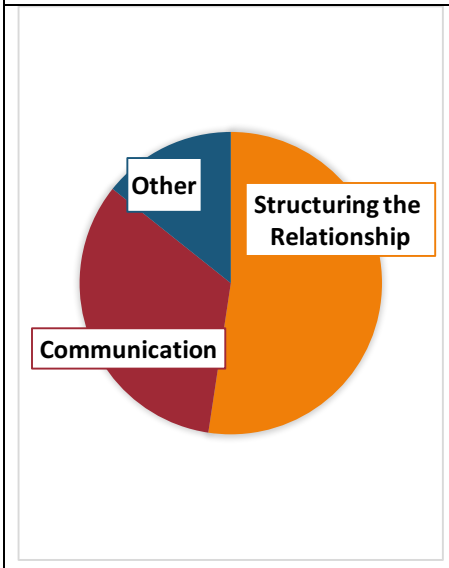
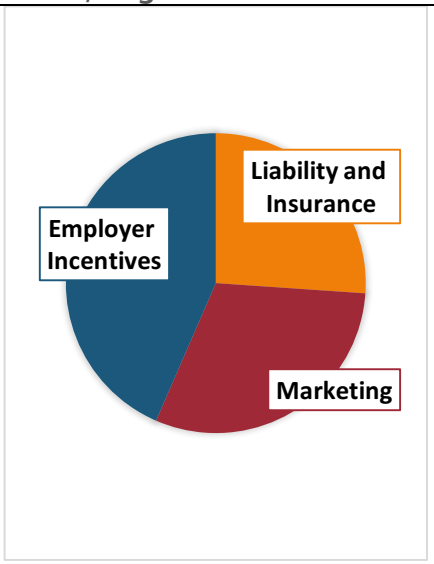
7-14/16 Pathways

State	Local/Regional	Selected Quotes
		• National Career Readiness Certificate – required for all students *-Southwest* • Provide more flexibility on how POS evolve and are developed *-Southeast* • Increase funding for dual enrollment courses *-Upper Cumberland* • Improve transition points between 7-14/16 & post-secondary & industry *-Northwest*

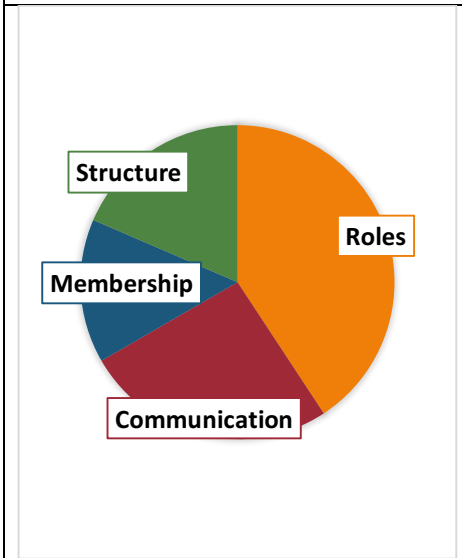
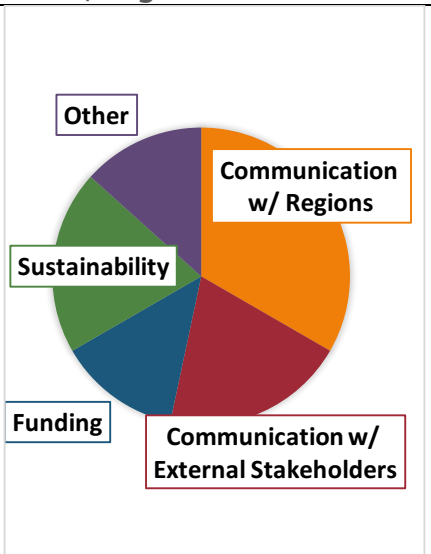
Career Information and Advising

State	Local/Regional	Selected Quotes
		• School counselors: divide behavioral counseling from career counseling *-Northwest* • Develop marketing materials and help teachers/counselors better understand the pathways *-Upper Cumberland* • State needs to change ratio for counselors funding (BEP) *- Southeast* • Virtual counseling – since counselors can't physically see and counsel every student *- Southwest*

Employer Engagement

State	Local/Regional	Selected Quotes
		• Communicate needs to industry – employer engagement to understand the needs. Define pathway clearly *-Southeast* • More diversity – faces/voices at the table *-Upper Cumberland* • Create incentives for industry to partner with regions and/or districts (tax incentives, subsidized internships) → provide training equipment/instruction/input *-Northwest* • Underwrite liability policy for WBL opportunities where legality and liability concerns create barriers *-Southwest*

Intermediaries

State	Local/Regional	Selected Quotes
		• Consolidate students from different districts to make classes for smaller districts (state funding, local commitment) *-Upper Cumberland* • Facilitate positive industry/education alliances: highlight best practices; networking *-Southeast* • CTE is not seen as important as college-bound students. State could help. *-Northwest* • Include our SW Pathways on all chambers', cities, and counties' website links [regional recommendation] *-Southwest*

During the focus groups, participants rated their regional work using a Site Observation tool developed by Pathways TN. Then, for each of the Pathways TN levers, participants were asked to develop recommendations for the local/regional level and for the state level. The pie charts above indicate the general categories or 'buckets' that these recommendations represented. (The categories were developed *after* analyzing the recommendations.) Overall, there was remarkable consistency across regions.

Appendix Item 8: Pathways TN 3-Year Strategic Action Plan

TN NSFY 3-Year Action Plan

Communications

Year 3 Goal: All stakeholders informed of K-16 learning pathways and empowered to actively engage

Year 1 Interim Goal: State and regional stakeholders are empowered and equipped with necessary tools to promote local ownership of pathways.

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Cross-agency communications team established to begin meeting quarterly to identifying gaps and needed resources for Pathways Tennessee	Feb-17		DOE/State Planning Team	Not Started
One-pagers on Pathways Tennessee developed for various stakeholder groups	Mar-17		DOE/communications team	Not Started
Suite of consistent branding materials developed for state and regional use	Apr-17		Communications consultant	Not Started
Vision of communications for Pathways Tennessee gathered to inform the development of a cross-agency state plan	May-17		Communications team	Not Started
Local pathways offering marketing materials to be customized by region and shared with	May-17		DOE/intermediaries	Not Started
Hold brand awareness focus groups with students and families across the state	Jun-17		DOE/intermediaries/communication	Not Started
Pathways Tennessee Summit with a communications focus - all regions in Tennessee represented	Jun-17		DOE/State Planning Team/regional stakeholders	Not Started
General Pathways Tennessee video developed to be added to pathwaystn.org	Jul-17		DOE/communications consultant	Not Started
Communications deliverables and key action steps mapped out to lay the foundation for cross-agency state plan	Jun-17		Communications team	Not Started
Implement bi-monthly general newsletter highlighting promising practices across the state that reflect Pathways 6 framework components - to be distributed digitally to key regional stakeholders and other state agencies	Aug-17		DOE	Not Started
Steering committee meetings in all 9 regions to begin mapping out goals and strategies for regional communications plan - facilitated by intermediaries with DOE staff as partners	Sep-17		DOE/Intermediaries	Not Started
Social media training or webinar offered to regional stakeholders	Oct-17		DOE/JFF/Communications team	Not Started
Intermediaries draft goals and strategies for communications based on steering committee	Oct-17		Intermediaries	Not Started
Train the trainer resources developed for intermediaries to empower all adults to assist in student advisement and to ensure consistent branding across the state	Nov-17		Communications team	Not Started
Beginning plans for "Pathways week" social media and events campaign	Nov-17		Communications team	Not Started

	Ensure alignment between regional goals and strategies for communications to established cross-sector state priorities	Nov-17		Communications team	Not Started
	Q 1 Benchmark (March 2017): "Members only" site for key stakeholders established and rolled out to share promising practices and resources for pathways implementation				In Progress
	Q 2 Benchmark (June 2017): Results of brand awareness focus groups have been analyzed and released				Not Started
	Q 3 Benchmark (Sept 2017): Cross-agency state communications plan developed to leverage existing communciations channels and develop needed materials				Not Started
	Q 4 Benchmark (Dec 2017): All regions have a finalized multi-year local communications plan that includes strategy and growth objectives				Not Started
Year 2 Interim Goal: Increase in awareness and quality of engagement from all stakeholders					
	Deliverable/Task	**Projected End Date**	**Date Completed**	**Responsible Persons**	**Status**
	Regional newsletters established to be shared on a regular basis with current and potential stakeholder partners highlighting regional work and needs	Feb-18		Intermediaries	Not Started
	One-pagers for various stakeholder groups modified for regional use to call out specific educational institutions and offerings, as well as regional workforce needs	Mar-18		Intermediaries/regional stakeholders	Not Started
	Begin designing more user-friendly website using TNECD.com as a model; begin drafting	Apr-18		Communications team	Not Started
	Interest meetings with various stakeholders scheduled out by each region	Apr-18		Intermediaries/regional champions	Not Started
	Content developed for Facebook ads, radio PSAs, and other public communications channels	May-18		Communications team	Not Started
	Updated regional communications plans submitted by regions	Jun-18		Intermediaries	Not Started
	Op-ed pieces developed on the importance of pathways and postsecondary and career readiness that can be modified by regions and shared with local media	Jun-18		Communications team/communications consultant	Not Started
	Social media presence of individual regions established to begin promoting awareness of local pathways initiatives	Jul-18		Intermediaries/regional stakeholders	Not Started
	Hold brand awareness focus groups with students and families across the state	Jul-18		DOE/intermediaries/communication	Not Started
	General pathways video developed for each region using Southeast as a model	Aug-18		Communications team/communications consultant	Not Started
	Train the trainer materials developed by intermediaries to be shared with key regional stakeholders; state as partner in development	Sep-18		Intermediaries/DOE	Not Started

	First "Pathways week" held	Oct-18		DOE/Pathways state planning	Not Started
	Suite of profile videos developed highlighting individual success stories and promising practices across the state - regional stakeholders to identify individuals and stories to highlight	Oct-18		Regional stakeholders/communications	Not Started
	Promote WBL continuum across schools through cross-agency communications channels	Dec-18		DOE/Intermediaries/THEC	Not Started
	Q 1 Benchmark (March 2018): Full implementation of regional communications plans is				Not Started
	Q 2 Benchmark (June 2018): Public awareness campaign launched by cross-agency communications team				Not Started
	Q 3 Benchmark (Sept 2018): Results of brand awareness focus groups have been analyzed and released				Not Started
	Q 4 Benchmark (Dec 2018): Increased number of partners in each stakeholder group for each region				Not Started
Year 3 Goal: All stakeholders informed of K-16 learning pathways and empowered to actively engage					
Deliverable/Task		**Projected End Date**	**Date Completed**	**Responsible Persons**	**Status**
	Comprehensive assessment of all developed regional communciations tools and channels to ensure alignment with shared state priorities	Feb-19		Communications team	Not Started
	One-pagers for students and families translated into other languages, starting with Spanish and other needed languages identified by individual regions	Mar-19		DOE/contract translators	Not Started
	Build websites consistent with state branding for each region outlining pathways offered and resources for stakeholders, students and families; regional stakeholders lead content	Jun-19		Regional stakeholders/communications	Not Started
	Updated regional communications plans submitted by regions	Jun-18		Intermediaries	Not Started
	Development of sector based videos for Pathways focus areas - advanced manufacturing, health science, IT	Aug-19		Regional stakeholders, communications consultant	Not Started
	"Pathways week" held	Oct-19		DOE/Pathways state planning	Not Started
	Hold focus groups to gather feedback and effectiveness of regional and state communications materials; communications team to identify sites for focus groups, with specific emphasis on including underserved student subgroups	Oct-19		Regional stakeholders/DOE/communications team	Not Started
	Q 1 Benchmark (March 2019): Cross-agency communications team regional assessment findings released to regions				Not Started
	Q 2 Benchmark (June 2019): Newly developed data dashboard included on Pathways Tennessee website to externally communicate growth and key data points				Not Started

	Q 3 Benchmark (Sept 2019): Pathwaystn.org is on a more user-friendly platform and acts as centralized hub of resources for all stakeholders				Not Started
	Q 4 Benchmark (Dec 2019): Data shows increased participation and completion of pathways				Not Started

TN NSFY 3-Year Action Plan

Key Objective #1: Demand Driven and Employer Led Processes

Year 3 Goal: Strong relationships between employers and educational systems that respond rapidly to regional industry trends and demands; and ensure student work experiences and academic credentials are valued by employers.

Year 1 Interim Goal: Gain baseline knowledge around what exists and what is possible for industry engagement

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
From the LEAP report, develop an education map which shows either alignment or cold spots in program offerings compared to areas of high need	**February**		DOE,ECD,THEC	Not Started
Communicate out to agencies with regional offices and subcontractors to raise awareness of employment opportunities	**March**		SCORE,TICUA,ECD,DOL,DHS,DOE,THEC,TBR,Business Roundtable	Not Started
Develop a formalized process to engage LEAs in Workforce 360 intiative meetings with businesses to increase local relationships between education and industry	**June**		DOE,ECD	Not Started
Employer engagement and work-based learning (WBL) implementation will be assessed across the state using surveys to districts and employers, using information gathered to provide targeted guidance and assistance for school districts (LEAs) and to inform state policy	**August**		DOE,ECD	Not Started
Research industry advisory councils to identify opportunities to leverage existing resources to better support pathways selection and design	**August**			Not Started
Research advisory councils across Tennessee to understand any requirements, process, frequency, and purpose comparative to scope and purpose at the state	February		DOE,TBR,SCORE	Not Started
Conduct best practice visits on advisor councils , gather information on effective practices around recruitment, meeting structure, mission, engagement opportunties, leveraging relationships	May		DOE,TBR,SCORE	Not Started
Develop a white paper for communities to understand the roles of advisory councils, how to work with them, and how to get involved in this capacity at a local institution	August		DOE,TBR,SCORE	Not Started
Establish a coalition to research and develop a work-based learning incentive bill for employers	**December**			Not Started
Identify team, pull together legislation and promising practices across the nation	March		DOE,ECD	Not Started
Convene industry workgroup to better understand the needs in an incentive to employ under 18 youth	May		DOE,ECD,Business Roundtable,DOL	Not Started
Craft legislative bill and identify sponsor	August		DOE,ECD,Gov Office- identify sponsor	Not Started
Q 1 Benchmark (Jan-Mar 2017):Using established reports, communicate opportunities to all stakeholder groups. Begin work on advisory councils to leverage existing stakeholders in greater aligning program justification to pathway advising for secondary and postsecondary systems.				
Q 2 Benchmark (April-June 2017): Review exisitng policy and practices between education and workforce to gain a baseline of where most stakeholders are at and what could be early wins.				
Q 3 Benchmark (July-Sept 2017):Continued research through surveys across agencies and begin crafting legislation based on strong practics and Tennessee needs.				

	Q 4 Benchmark Oct-(Dec 2017): Establish a team to look for incentives and promising practices for greater collaboration between education and industries using the research as a foundation to create a plan.				

Year 2 Interim Goal: Build capacity for industry engagement in educational opportunities for all students and begin measuring growth across the state

	Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
	Promote and pass work-based learning incentive bill	**April**			Not Started
	Publicize and communicate the bill and benefits for TN economy	April		SCORE,Business Roundtable, TBR, ECD, TICUA, DOE, Chambers of Commerce, DOL	Not Started
	Implement an employer engagement resource at the state to recruit industry partners to support work-based learning programs across k-16	**April**		DOE,TBR,ECD,DOL	Not Started
	Develop a state-level and regional-level dashboard that incorporates LMI and program outcomes across the state	**April**			Not Started
	Review existing dashboards used by state agencies and a national scan of possible best practices which would allow us to record pathways progress and partnerships on a regional and state level	March		DOE,SCORE,THEC,DOL	Not Started
	Develop data fields and verify data sources as reliable information	April		DOE,SCORE,THEC,DOL	Not Started
	Development of dashboard infrastructure for both regional and state levels	**June**			Not Started
	Identify housing agency	March		DOE,THEC,DOL	Not Started
	Create layout and access procedures	June		DOE,THEC,DOL	Not Started
	Secure data sharing agreements from necessary agencies	June		DOE,THEC,DOL	Not Started
	Engage LEAs in Workforce 360 training and communications to further support education and workforce development in communities	**July**		DOE, LEAs, ECD	Not Started
	Implementation of work-based learning incentive bill	**August**			Not Started
	Communicate and promote incentive bill to students, parents, industry, chambers of commerce to recruit partners and participants	August		SCORE,Business Roundtable, TBR, ECD, TICUA, DOE, Chambers of Commerce, DOL	Not Started
	Industry partners onboarded	July		DOE,TBR	Not Started
	Certify teachers and onboard work-based learning sites	July		DOE,TBR,DOL	Not Started
	Provide PD to advisory councils on state best practices and initiatives to improve program selection and pathways oportunities for students	**August**			Not Started
	Develop joint PD based on promising practices identified	April		DOE,TBR	Not Started
	Schedule and provide trainings across the state to secondary and postsecondary advisor councils	August		DOE,TBR	Not Started
	Training of staff and testing of dashboards	**December**			Not Started
	Static fields in place for early usage	August		DOE,THEC,DOL	Not Started
	Information upload	October		DOE,THEC,DOL	Not Started
	Statewide training	December		DOE,THEC,DOL	Not Started
	Promote WBL continuum across schools through cross-agency communications channels	**December**		DOE/Intermediaries/THEC	Not Started
	Q 1 Benchmark (Jan-Mar 2018): Begin developing dashboards for pathways programs regionally and identification of metrics. Create communications materials to promote WBL incentive bill and identify champions for communications.				

	Q 2 Benchmark (April-June 2018): Communications push for expanding WBL resources and opportunities through WBL incentive bill. Identify metrics for standardized regional pathway dashboards and state dashboard.				
	Q 3 Benchmark (July-Sept 2018): Recruitment and pairing of industry and school teams, WBL training/certification for students and worksites, first cohot of students and industry partners using incentive bill will take place.				
	Q 4 Benchmark Oct-Dec 2018): Dashboard training across the state and the upload of static information to test dashboard capabilities.				

Year 3 Interim Goal: Significantly increase the quality of industry and education relationships while empowering local development of relationships

	Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
	Roll out of regional and state dashboards	**February**		DOE, THEC, DOL	Not Started
	High schools are directly involved in industry response meetings through Workforce 360 initiative meetings	**May**		LEAs,ECD	Not Started
	Regional strategic plans will expand to include goals and steps around employer engagement/WBL	**August**		DOE,ECD	Not Started
	Leverage industry advisory board expertise to identify credentials relevant to regional workforce needs and the appropriate pathway for those credentials and compare to the DOE promoted list to identify gaps within the promoted 16 career clusters	**October**		DOE,TBR	Not Started
	Clear, progressive WBL experiences exist within schools	**December**		DOE,TBR	Not Started
	Q 1 Benchmark (Jan-Mar 2019): Dashboards are up for public viewing of pathways intiaitives across the state. Promote dashboards through cros s-agency communication channels				
	Q 2 Benchmark (Apr-June2019): Through exisiting state initiatives, districts will have a process in place to engage with employers around education pipelines and local engagement opportunities for employers				
	Q 3 Benchmark (July-Sept 2019): Process is in place for monitoring and documenting the frequency and depth of employer engagement.				
	Q 4 Benchmark (Oct-Dec 2019): Advisory boards ensure promoted credentials are relevant for state,regional, and local workforce opportunities.				

TN NSFY 3-Year Action Plan

Key Objective #2: Rigor and Quality in Career Pathways for All

Year 3 Goal: Every student will have access to rigorous K-16 learning pathways leading to high-wage, high-skill careers

Year 1 Interim Goal: Plans to make rigorous pathways accessible to underserved populations have been established

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Legislative requests from DOE to support access to learning pathways for all	**Aug-17**		**DOE**	Not Started
Tuition Equality Bill introduced in legislative session	Jan-17		DOE/Tennessee Gene	Not Started
Following passage of Tuition Equality, research other states who have passed legislation allowing undocumented students to access state financial	Jul-17		DOE	Not Started
Expand regional strategic plans to include access and outreach initiatives and justification of pathways offerings	**Aug-17**		**Intermediaries/regional stakeholders**	Not Started
Research of non-profit services and resources for underserved populations in all 9 regions to identify needed wraparound services to promote access	Apr-17		DOE/intermediaries/ regional stakeholders	Not Started
Regions include pathways justifications as a part of strategic plans, including labor market data and area postsecondary offerings	Aug-17		Intermediaries	Not Started
Existing pathways regions will add additional counties to regional pathways work	**Aug-17**		**Intermediaries/regional stakeholders**	Not Started
Assess access to pathways and career opportunities in high-wage, high-skill sectors	Dec-17			Not Started
Student and parent focus groups composed of underserved subgroups held to assess career awareness and requisites, as well as perceived barriers to learning pathways	Nov-17		DOE/intermediaries	Not Started
Review student enrollment and completion data by subgroup to assess	Dec-17		DOE	Not Started
Q 1 Benchmark (March 2017): Updated regional strategic plan template completed				Not Started
Q 2 Benchmark (June 2017): Regional inventory of community supports for underserved populations completed				Not Started
Q 3 Benchmark (Sept 2017): Regional plans in place to increase access to rigorous education to career learning pathways				Not Started
Q 4 Benchmark (Dec 2017): Qualitative and quantitative data gathered to assess access gaps to pathways				Not Started

Year 2 Interim Goal: Regional stakeholders have taken ownership of making pathways more accessible to underserved populations				
Deliverable/Task	**Projected End Date**	**Date Completed**	**Responsible Persons**	**Status**
Compile student enrollment and completion data by subgroup to assess access gaps as a part of regional intermediary meetings	**Jan-18**		**DOE**	Not Started
Share information with various stakeholder groups on pathways offerings and career opportunities to promote equitable access				Not Started
Professional development offered to middle and high school counselors in existing pathways regions on postsecondary options and career opportunities in high-wage, high-skill sectors	Apr-18		DOE/intermediaries/ local industry and postsecondary	Not Started
Share Pathways Tennessee communications materials with non-profit organizations across the state to distribute in underserved communities	Jul-18		DOE	Not Started
Parent info sessions offered on postsecondary options and career opportunities in high-wage, high-skill sectors specifically targeting underserved populations - based on focus group findings	Jul-18		DOE/intermediaries/ local industry and postsecondary	Not Started
Professional development offered to middle and high school administrators in new pathways regions on postsecondary options and career opportunities in high-wage, high-skill sectors	Sep-18		DOE/intermediaries/ local industry and postsecondary	Not Started
Existing pathways regions will add additional counties to regional pathways work	**Aug-18**		**Intermediaries/regional stakeholders**	Not Started
Legislative requests from DOE to support access to learning pathways for all	**Aug-18**		**DOE**	Not Started
Bill introduced in legislative session to grant access to state financial aid resources to undocumented students	Jan-18		DOE/Tennessee Gene	Not Started
Develop policy and program recommendations for newly elected governor	**Nov-18**		**DOE/Pathways State Planning Team**	Not Started
Community college transference and crosswalk MOU established	**Dec-18**		**DOE/TBR**	Not Started
Q 1 Benchmark (March 2018): Presentations and materials developed and logistics worked out for professional development sessions				Not Started
Q 2 Benchmark (June 2018): Communications materials to be shared with non-profits finalized; materials and presentations for parent info sessions modified and				Not Started
Q 3 Benchmark (Sept 2018): Broader awareness of pathways offerings across stakeholder groups, leading to increased capacity for student advisement; additional counties participating in regional pathways initiatives				Not Started

Year 3 Goal: Every student will have access to rigorous K-16 learning pathways leading to high-wage, high-skill careers					
	Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
	Compile student enrollment and completion data by subgroup to assess access gaps as a part of regional intermediary meetings	Jan-19		DOE	Not Started
	Parent and student surveys from all subgroups collected from all 9 regions to assess career awareness and requisites, as well as perceived barriers to learning pathways	May-19		DOE/intermediaries	Not Started
	State-level cross-sector plan for making pathways more accessible to underserved populations modified based on parent surveys	Aug-19		Pathways state planning team	Not Started
	Existing pathways regions will add additional counties to regional pathways work	Aug-19		Intermediaries/regional stakeholders	Not Started
	School capacity for pathways programs reflects regional workforce needs	Aug-19		LEAs/regional teams/DOE/THEC	Not Started
	Local events implemented to promote pathways opportunities to underserved populations	Sep-19		Intermediaries/regional	Not Started
	Q 1 Benchmark (March 2019): Parent and student surveys designed, plan developed with intermediaries to distribute them				Not Started
	Q 2 Benchmark (June 2019): Parent and student surveys assessed in comparison to previous focus groups to determine increase in knowledge and ability to access				Not Started
	Q 3 Benchmark (Sept 2019): Pathways work has expanded in every region with appropriate capacity to meet regional workforce needs				Not Started
	Q 4 Benchmark (Dec 2019): Increase in the number of students from underserved subgroups accessing and completing pathways compared to 2018 year-end data				Not Started

TN NSFY 3-Year Action Plan

Key Objective #3: Career-Focused Accountability System

Year 3 Goal: A pervasive state commitment to regularly align and leverage cross-institutional plans, policies, programs and funding at the state, regional and local levels

Year 1 Interim Goal: Ensure our data gathering methods produce accurate and timely information

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Hold twice yearly gatherings with all regional intermediaries and their stakeholders to review data and revise or affirm regional and cross-regional strategic plans	January/July		DOE/Intermediaries	Not Started
Hold annual statewide planning team retreat to identify cross-institutional collaboration and leveraging opportunities	February		DOE,TBR,THEC,TICUA,SCORE	Not Started
Career Forward Task Force recommendations will be finalized and folded into state plan	March		DOE	Not Started
Identify measures for each pathways framework component area that have verifiable data points, or need verifiable data points	April		DOE,TBR,THEC,TICUA,SCORE	Not Started
Utilize the longitudinal data sytem and other data dashboards to gain access to pertinent state, regional, and local data	May		DOE	Not Started
Ensure appropriate data sharing agreements exist between state institutions	May		DOE,TBR,THEC,DOL,ECD,DHS	Not Started
Identify all necessary datum and implement a process to acquire identified data	May		DOE,TBR,THEC,TICUA,SCORE	Not Started
Release an annual report that measures progress towards state and regional goals as expressed through strategic plans	November		DOE,TBR,THEC,TICUA,SCORE	Not Started
ESSA? Implementation timeline?				Not Started
Q 1 Benchmark (Jan-Mar 2017): Career Forward recommendations will translate into an action plan for the department of education, regional teams will come together to discuss data, and the state Pathways Planning Team will identify priority areas of cross-collaboration and leveraging existing opportunities				

	Q 2 Benchmark (April-June 2017): The state will continue to move toward using verified information sources for measuiring progress and growth for dashboards and regional accountability and will identify all necessary data points for the implementation of NSFY 2 as well as necessary data agreements.				
	Q 3 Benchmark (July-Sept 2017): Planning and writing of annual report.				
	Q 4 Benchmark Oct-(Dec 2017): Through data efforts across the objectives, release annual report of state toward the combined goal of: Ensure all students are provided equitable access to high-quality, vertically aligned K-16 learning pathways that are reflective of, and linked to, local, regional, and state economic and labor market needs, leading to the promotion of a workforce that is well-educated and well-skilled in their chosen fields.				

Year 2 Interim Goal: Make changes to accountability systems to encourage college and career readiness and programs which support this

	Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
	Hold twice yearly gatherings with all regional intermediaries and their stakeholders to review data and revise or affirm regional and cross-regional strategic plans	**January/July**		**DOE/Intermediaries**	Not Started
	Hold annual statewide planning team retreat to identify cross-institutional collaboration and leveraging opportunities	**February**		**DOE,TBR,THEC,TICUA,SCORE**	Not Started
	Career focused indicators are reported on the state reportcard	**October**		**DOE,THEC**	Not Started
	Release an annual report that measures progress towards state and regional goals as expressed through strategic plans	**November**		**DOE,TBR,THEC,TICUA,SCORE**	Not Started
	ESSA? Implementation timeline?				
	Q 1 Benchmark (Jan-Mar 2018): Gather regional intermediaries to discuss annual report and necessary changes to increase access and opportunity for students, funding streams for additional support and sustianability, state team review collaboration focus areas and make changes if necessary for our goal, and communicate available data for regional teams to make informed decisions.				
	Q 2 Benchmark (April-June 2018):				
	Q 3 Benchmark (July-Sept 2018): Regional teams review program selection comparative to workforce demands and identify changes necessary for the following year, career focused indicators are now public facing on state report card				

	Q 4 Benchmark Oct-Dec 2018): Through data efforts across the objectives, release annual report of state toward the combined goal				

Year 3 Interim: A pervasive state commitment to regularly align and leverage cross-institutional plans, policies, programs and funding at the state, regional and local levels

	Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
	Hold twice yearly gatherings with all regional intermediaries and their stakeholders to review data and revise or afirm regional and cross-regional strategic plans	January/July		DOE/Regions	Not Started
	Hold annual statewide planning team retreat to identify cross-institutional collaboration and leveraging opportunities	February		DOE,TBR,THEC,TICUA,SCORE	Not Started
	The longitudinal data system will support the identification of 1) matriculation from all earned secondary to postsecondary credits and 2) employment after high school.	June		DOE,THEC,DOL,ECD	Not Started
	Release an annual report that measures progress towards state and regional goals as expressed through strategic plans	November		DOE,TBR,THEC,TICUA,SCORE	Not Started
	Q 1 Benchmark (Jan-Mar 2019): Gather regional intermediaries to discuss annual report and necessary changes to increase access and opportunity for students, funding streams for additional support and sustianability, state team review collaboration focus areas and make changes if necessary for our goal, and communicate available data for regional teams to make informed decisions.				
	Q 2 Benchmark (Apr-June2019): P20W longitudinal data system will include the remaining components of information necessary to look at a students path through a singular database.				
	Q 3 Benchmark (July-Sept 2019):Regional teams review program selection comparative to workforce demands and identify changes necessary for the following year.				
	Q 4 Benchmark (Oct-Dec 2019): Through data efforts across the objectives, release annual report of state toward the combined goal.				

TN NSFY 3-Year Action Plan

Key Objective #4: Scaled Pathways that Culminate in Credentials

Year 3 Goal: Pathways completers are equipped with skills, postsecondary degrees, and credentials that are industry-valued and relevant to

Year 1 Interim Goal: All pathways identified in regional strategic plans follow the scope and sequence of the DOE programs of study, have clear alignment to postsecondary programs leading to certification and/or degree and identified regional employment opportunities.

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Build capacity with regional teams				Not Started
Host professional development session for intermediaries with peer consultancy around pathways framework components as the focus	Feb-17		DOE/Intermediaries	Not Started
Intermediary onboarding process developed that includes roles, responsibilities, and expectations of regional intermediaries	Mar-17		DOE/JFF	Not Started
Focus groups held with key regional stakeholders from K-12, postsecondary, and industry in all 9 regions using Pathways Tennessee's Site Observation Tool to lay the foundation for strategic planning and to identify promising practices	Apr-17		DOE/Intermediaries/regional stakeholders	Not Started
Development of readiness rubric to assess regional capacity to implement or expand 6 framework components	Jun-17		DOE	Not Started
Regional strategic plans with goals and action steps around implementing and expanding pathways drafted with input from representatives from K-12, postsecondary and industry to ensure buy-in - includes pathways documentation tools outlining high school course offerings, aligned postsecondary program, credentials offered, and career opportunities	Jul-17		Intermediaries/regional stakeholders	Not Started
Host professional development session for intermediaries with employer engagement and WBL as the focus	Nov-17		DOE/champions from indust	Not Started
Webinar following release of LEAP report to reinforce current workforce needs	Dec-17		ECD	Not Started
Support school counselors with education and career resources				Not Started
Locate and highlight best practices for career counseling in non-traditional fields for subgroups and share with counselors	Feb-17		DOE	Not Started

	Professional development for school counselors on postsecondary options and career opportunities in high-wage, high-skill sectors to increase the quality of postsecondary and career advising for students	Oct-17		DOE	Not Started
	Perform yearly census of active articulation agreements to assess gaps and measure growth of seamless pathways available to students	**Nov-17**		**DOE/TBR**	Not Started
	Audit EPSO data collected by DOE, P20, TBR to identify sources and gaps	**Dec-17**		**DOE**	Not Started
	Q 1 Benchmark (March 2017): Regional focus group prep has been completed; process established for outlining roles and responsibilities of intermediaries				
	Q 2 Benchmark (June 2017): Readiness rubric developed for regions to assess district and regional readiness to produce a ready workforce				
	Q 3 Benchmark (Sept 2017): Presentations and materials developed and logistics worked out for counselor professional development sessions; prep for intermediary professional development has begun				
	Q 4 Benchmark (Dec 2017): Gaps assessed on state level in partnership with postsecondary agencies; professional development sessions for intermediaries and counselors complete and next steps established				
Year 2 Interim Goal: Increased quality of pathways offerings around six key framework components across regions					
Deliverable/Task		**Projected End Date**	**Date Completed**	**Responsible Persons**	**Status**
	Master scheduling models of practice identified to be used at secondary and postsecondary levels				Not Started
	Complete a study of promising practices with master scheduling at the secondary and postsecondary level to ensure that courses relevant to student pathways are more widely available	Jan-17		DOE, TBR, THEC	Not Started
	Use models identified in master scheduling study and promote to school districts and postsecondary institutions across Tennessee to allow for greater flexibility in student scheduling	Aug-17		DOE, TBR, THEC	Not Started
	Build capacity with regional teams				Not Started
	Host professional development session for intermediaries with strong career counseling models as the focus	Feb-18		DOE/Intermediaries	Not Started
	Suite of webinars developed outlining Pathways Tennessee framework components - differentiated by stakeholder group	Mar-18		DOE	Not Started

	Focus groups held with key regional stakeholders from K-12, postsecondary, and industry in all 9 regions using readiness rubric to lay the foundation for strategic planning, identify promising practices, and assess district and regional readiness to produce a ready workforce	Apr-18		DOE/Intermediaries/regional stakeholders	Not Started
	Regional intermediaries work with postsecondary institutions to assess options for virtual coursework to make EPSOs available to more students	May-18		Intermediaries/postsecondary institutions	Not Started
	Regional strategic plans with goals and action steps around implementing and expanding pathways drafted with input from representatives from K-12, postsecondary and industry to ensure buy-in - includes pathways documentation tools outlining high school course offerings, aligned postsecondary program, credentials offered, and career opportunities	Jul-18		Intermediaries/regional stakeholders	Not Started
	Host professional development session for intermediaries with regional sustainability as the focus	Nov-18		DOE	Not Started
	Webinar following release of LEAP report to reinforce current workforce needs	Dec-18		ECD	Not Started
	Perform yearly census of active articulation agreements to assess gaps and measure growth of seamless pathways available to students	**Nov-18**		**DOE/TBR**	Not Started
	Audit EPSO data collected by DOE, P20, TBR to identify sources and gaps	**Dec-18**		**DOE**	Not Started
	Q 1 Benchmark (March 2018): Master scheduling study completed; additional trainings and webinars offered to regional stakeholders				
	Q 2 Benchmark (June 2018): Focus group findings have been compiled and released to regions; action steps for increasing access to EPSOs established between intermediaries and postsecondary partners				
	Q 3 Benchmark (Sept 2018): Models of practice for master scheduling identified to use at secondary and postsecondary levels to drive decision making				
	Q 4 Benchmark (Dec 2018): Gaps assessed on state level in partnership with postsecondary agencies; intermediary professional development complete and next steps established				
Year 3 Goal: Pathways completers are equipped with skills, postsecondary degrees, and credentials that are industry-valued and relevant to regional workforce needs					
	Deliverable/Task	**Projected End Date**	**Date Completed**	**Responsible Persons**	**Status**
	Build capacity of regional teams				

	Host professional development session for intermediaries with EPSOs as the focus, especially developing MOUs/articulation agreements with postsecondary institutions	Feb-19		DOE/Intermediaries	Not Started
	Focus groups held with key regional stakeholders from K-12, postsecondary, and industry in all 9 regions using readiness rubric to lay the foundation for strategic planning, identify promising practices, and assess district and regional readiness to produce a ready workforce	Apr-19		DOE/Intermediaries/regional stakeholders	Not Started
	Report published on vertical alignment to be shared with stakeholders across the state	Jun-19		DOE	Not Started
	Regional strategic plans with goals and action steps around implementing and expanding pathways drafted with input from representatives from K-12, postsecondary and industry to ensure buy-in - includes pathways documentation tools outlining high school course offerings, aligned postsecondary program, credentials offered, and career opportunities	Jul-19		Intermediaries/regional stakeholders	Not Started
	Host professional development session for intermediaries with middle school career exploration as the focus - including peer consultancy	Nov-19		DOE/Intermediaries	Not Started
	Webinar following release of LEAP report to reinforce current workforce needs	Dec-19		ECD	Not Started
	Perform yearly census of active articulation agreements to assess gaps and measure growth of seamless pathways available to students	**Nov-19**		**DOE/TBR**	Not Started
	Audit EPSO data collected by DOE, P20, TBR to identify sources and gaps	**Dec-19**		**DOE**	Not Started
	Q 1 Benchmark (March 2019): Intermediaries trained on developing MOUs and articulation agreements with postsecondary institutions and have clear next steps				
	Q 2 Benchmark (June 2019): Focus group findings have been compiled and released to regions; vertical alignment report released				
	Q 3 Benchmark (Sept 2019): Increased number of EPSOs across regions as a result of more MOUs and articulation agreements with postsecondary institutions				
	Q 4 Benchmark (Dec 2019): Gaps assessed on state level in partnership with postsecondary agencies; intermediary professional development complete and next steps established				

TN NSFY 3-Year Action Plan

Key Objective #5: Align State and Federal Funding Streams

Year 3 Goal: Sustained outcomes that are responsive to, and meet more, needs of our most underserved communities and residents, leading to higher educational attainment, economic growth and sustainable employment.

Year 1 Interim Goal: Establish a baseline of existing services and connection points for pathways program delivery systems and wraparound supports

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Asset map funding sources across agencies and initiatives	**June**			Not Started
Develop a funding guidance document around the pathways framework component areas and agencies that could support certain aspects	April		DOE,TBR,THEC,Gov. Office, DOL,ECD, DHS	Not Started
Communication content and strategies created and shared with partnering agencies for funding asset map	May		DOE,TBR,THEC,Gov. Office, DOL,ECD, DHS	Not Started
Funding best practices highlighted jointly across agencies to encourage adoption and replication	June		DOE,TBR,THEC,Gov. Office, DOL,ECD, SCORE, DHS	Not Started
Increase alignment of initiatives and goals to minimize duplication and waste	**September**			Not Started
Funding from department initiatives will be mapped and presented to show investment focus, location, and benefits	June		DOE,TBR,THEC,DOL,ECD,DHS	Not Started
Review/map past investments and outcomes and impact on partnering organizations	July		DOE,TBR,THEC,DOL,ECD,DHS	Not Started
Priorities will be outlined for each agency	September		DOE,TBR,THEC,DOL,ECD,DHS	Not Started
Q 1 Benchmark (Jan-Mar 2017): Establishing teams and compiling funding sources across agencies.				
Q 2 Benchmark (April-June 2017): State teams has a strong understanding of where funding is going , what populations are benefiting, and how those dollars impact their agency. Best practices are highlighted and shared across agencies and regional teams.				
Q 3 Benchmark (July-Sept 2017): Initiatives and grants are mapped for full clarity across agencies and funding priorities will be identified.				
Q 4 Benchmark Oct-(Dec 2017): Agencies have a clear understanding of shared priorities across incentive funding for certain populations.				

Year 2 Interim Goal: Expand access and quality of programs/opportunities through increased alignment of state competitive grants and initiatives

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Annually evaluate the alignment of state and regional goals, priorities and investments across agencies and across regions	**February**		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
State funding opportunities clearly promote shared agency goals and state priorities with a focus on regionalism and underserved populations for high priority sectors	**March**			Not Started
State agencies will identify shared priorities and any potential federal/state barriers to collaborative funding	January		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
Agencies will outline a funding plan for initiatives and work to align with other agencies	March		DOE,TBR,THEC, DOL,ECD, DHS	Not Started
From agency shared priorities, establish common measures of success for an educated and prepared workforce	March		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
Incentive grants offered to pathways regions for rural, distressed counties to promote equitable access and regionalism	August		TDOE/ECD	Not Started
Grow strong policy and programmatic practices for pathways across the state	**December**			Not Started
Evaluate funding and program outcomes from state intiatives identified in the funding guidance document and reflect the shared priorities of state agencies	October		DOE,TBR,THEC,DOL,ECD,DHS	Not Started
Jointly promote practices and programs for replication	December		DOE,TBR,THEC,Gov. Office, DOL,ECD, SCORE	Not Started
Q 1 Benchmark (Jan-Mar 2018): Opportunities and barriers will be identified for joint state funding and funding opportunities will promote shared agency goals to maximize state dollars				
Q 2 Benchmark (April-June 2018): Cross agency communication to raise importance of regionalism and state priorities				
Q 3 Benchmark (July-Sept 2018): Review number of pathways regions receiving dollars across the state. Communications regarding state funding supports and cohesive approach.				
Q 4 Benchmark Oct-Dec 2018): Review funding to date, promising practices, and share strong applications and activities with regional stakeholders to better leverage state dollars				

Year 3 Interim Goal: Sustained outcomes that are responsive to, and meet more, needs of our most underserved communities and residents, leading to higher educational attainment, economic growth and sustainable employment.

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Through an expansive communications campaign across all objectives and initiatives, promote local ownership to accomplish the Governor's Drive to 55 initiative and sustain pathways initiatives.	Ongoing		DOE,TBR,THEC,DOL,ECD,SCORE,TICUA, Gov. Office	Not Started

	Funding opportunities acknowledge and/or require cross-sector partnerships in order to receive reward for all identified funding sources relating to pathways programs	**February**		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
	Annually evalute the alignment of state and regional goals, priorities and investments across agencies and across regions	**February**		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
	Cultivate local and regional leadership committed to ensuring the success of cross-institutional learning pathways for all students	**June**		DOE,TBR,THEC,DOL,ECD, DHS	Not Started
	Q 1 Benchmark (Jan-Mar 2019): Consistent incentive funding requirments to increase regional and cross-agency collaboration, evaluate funding being allocated and return on investment.				
	Q 2 Benchmark (Apr-June2019): Through aligned funding, local and regional leadership will be promoting programs outside of state sponsored funding opportunities.				
	Q 3 Benchmark (July-Sept 2019):Accountability visits for state grants and communications are planned and shared around promising practices and locations.				
	Q 4 Benchmark (Oct-Dec 2019): Review funding to date and compare to dashboard data to identify trends over the last five years and revisit funding plan and strategic plan to make changes as necessary.				

TN NSFY 3-Year Action Plan

Key Objective #6: Ensure Cross-Institutional Alignment

Year 3 Goal: A societal environment that promotes seamless movement of individuals along a k-16 learning pathway, leading to viable, sustianable employment.

Year 1 Interim Goal:Understand local perception and issues of the pathway framework as well as barriers to local implementation

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Review cross-institutional policies to ensure alignment and make necessary revisions	**June**		DOE,TBR,THEC,TICUA,SCORE	**Not Started**
Annually document local partnerships and articulations through Pathways TN office for regional pathways initiatives	**August**		**DOE**	**Not Started**
Identify barriers or disruptions along the learning pathway delivery system for all students, particularly those who represent underserved, underprepared sub-groups	**October**			**Not Started**
Develop a plan to address data gaps along transition points in P20W longitudinal data system	June		DOE, THEC, TBR	**Not Started**
Focus groups with administrators around policy and funding barriers and student perception of preparation	July		DOE,TBR,THEC,TICUA,SCORE	**Not Started**
Share early findings at the state pathways summit	July		DOE,TBR,THEC,TICUA,SCORE	**Not Started**
Agency review of regional focus group findings and creation of possible policy list for year two	October		DOE,TBR,THEC,TICUA,SCORE	**Not Started**
Increase/expand state guidance and resources to increase student attainment of early postsecondary opportunities	**December**		DOE,THEC,TBR	**Not Started**
Q 1 Benchmark (Jan-Mar 2017):				
Q 2 Benchmark (April-June 2017): Work with P20W partners to identify barriers recieivng clean data across k-12 and postsecondary transitions.				
Q 3 Benchmark (July-Sept 2017): Meet with local stakeholders to better improve the learning pathway delivery system and document formalized k-12 and postsecondary partnerships for programs across the state.				
Q 4 Benchmark Oct-(Dec 2017):Share out resources, based on research, to improve understanding of the pathways framework, debunk myths, and highlight strong practices in different parts of the state.				

Year 2 Interim Goal:Expand understanding and state supports to implementing a k-16 pathway system

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Develop new cross-institutional policies addressing identified barriers based on regional focus group findings	**March**		**DOE,TBR,THEC,TICUA**	Not Started
Review existing cross-institutional policies to ensure alignment and make necessary revisions	**June**		**DOE,TBR,THEC,TICUA,SCORE**	Not Started
Evaluate the effectiveness of the pathway delivery system and make recommendations for improvements	**June**			Not Started
Use summer conferences to share promising practices of an effective delivery system	June		DOE,TBR,THEC,TICUA,SCORE	Not Started
Professional development offered to middle and high school administrators in existing pathways regions on postsecondary options and career opportunities in high-wage, high-skill sectors	October		TDOE/intermediaries/local industry and postsecondary representatives	Not Started
Complete a study on equitable matriculation from secondary programs to postsecondary programs along the pathway delivery system	November		DOE, THEC, SCORE	Not Started
Annually document local partnerships and articulations through Pathways TN office for regional pathways initiatives	**August**		**DOE**	Not Started
Q 1 Benchmark (Jan-Mar 2018): Based on focus gorup findings and research of the previous year, review cross-institutional polices to ensure the state is supporting seamless postsecondary transitions and early college access.				
Q 2 Benchmark (April-June 2018): Use events to highlight promising practices and resources				
Q 3 Benchmark (July-Sept 2018): Meet with local stakeholders to better improve the learning pathway delivery system and document formalized k-12 and postsecondary partnerships for programs across the state. Identify an increase of partnerships from year to year.				
Q 4 Benchmark Oct-Dec 2018):Complete a study to determine barriers preventing equitable transference of certain demographics completing secondary programs and entering postsecondary programs along an identified pathway program.				

Year 3 Interim Goal: A societal environment that promotes seamless movement of individuals along a k-16 learning pathway, leading to viable, sustainable employment.

Deliverable/Task	Projected End Date	Date Completed	Responsible Persons	Status
Communications push with regional leads around early postsecondary credit opportunities	**February**		**DOE,SCORE,THEC,Regions**	Not Started
Portfolio of options in every schoolaccountability measures around EPSOs; measurement of efforts; increase ongoing support, PD, partnerships, and program participation	**May**		**DOE,SCORE,THEC**	Not Started
Publish reports on vertical alignment/delivery system	**June**		**DOE**	Not Started

	Review cross-institutional policies to ensure alignment and make necessary revisions	**June**		**DOE,TBR,THEC,TICUA,SCORE**	Not Started
	Annually document local partnerships and articulations through Pathways TN office for regional pathways initiatives	**August**		**DOE**	Not Started
	Q 1 Benchmark (Jan-Mar 2019): Share communications and reports around early postsecondary credit to stakeholders in Tennessee				
	Q 2 Benchmark (Apr-June2019): Share reports and practices around vertical alignment as well as review cross-institutional policies to ensure access is available to all students				
	Q 3 Benchmark (July-Sept 2019): Meet with local stakeholders to better improve the learning pathway delivery system and document formalized k-12 and postsecondary partnerships for programs across the state. Identify an increase of partnerships from year to year.				
	Q 4 Benchmark (Oct-Dec 2019): State policies support a k-16 pathway framework and institution implementation.				

Appendix Item 9: Guiding Questions for Strategic Planning

Guiding Questions for Strategic Planning

Alignment

- What does the regional/local demand look like for career opportunities within your targeted focus areas/sectors?
- Do your secondary and postsecondary institutions in the area offer programs of study aligned your targeted focus areas/sectors?
- Do articulation agreements exist between your secondary and postsecondary institutions to ensure seamless education-to-career learning pathways?
- Are your secondary institutions promoting the correct capstone industry certifications for their programs of study? Are they moving students through their programs of study so the students can sit for, and successfully pass, the industry certifications?

Quality and Depth

- Do the education-to-career learning pathways include all the essential components identified in the Pathways TN framework?
- What is the quality of each Pathway? Are students demonstrating success?
    - Are students meeting high school graduation requirements?
    - Are students successfully matriculating to an aligned postsecondary program of study? Did they require remedial coursework?
    - Are students successfully concentrating in their chosen programs of study?
    - Are students earning industry certifications aligned with their chosen programs of study?
    - Are students earning early postsecondary credits?
    - Are students strengthening employability skills through WBL experiences?
    - Are students completing postsecondary programs of study and graduating on time?
    - Are students entering the workforce in targeted sectors with the required skills and credentials?
- At what grade level are students introduced to pathways? Are pathways promotionals communicated on an ongoing basis with students and families?
- How informed are school and district educators about education-to-career learning pathways?
- What type of postsecondary and career advising/counseling is available for students and families? Are student plans reviewed and revised annually to reflect growing interests and aligned coursework?
- Do WBL experiences span the secondary-postsecondary continuum? Are they specialized to targeted sectors and occupations?
- What does industry engagement look like within the Pathways initiative? What should it look like?
- Do Pathways stakeholders participate in industry advisory council meetings at the secondary and postsecondary levels?
- Are identified workforce needs being met as a result of the targeted pathways in the region?

Scope and Scale

- Do the current Pathways offerings serve enough students to meet regional/local labor market demands?
- How many high schools in the region/county offer identified POS for the Pathways initiative?
- What are the regional expansion priorities for the coming year (counties, high schools, number of students enrolled, capacity in existing high schools/counties, etc.)?
- Are there sufficient industry partners to provide WBL experiences for all students along the pathway?
- What is the recruitment strategy to bring in more industry partners as stakeholders in regional pathways initiatives?

Equity

- Are school policies and practices such that all students have access to and can enroll in a pathway? How is this confirmed across subgroups (race, gender, economically disadvantaged, disability, urbanicity)?
- Are certain students failing to start/complete pathways at notably high levels?
- What are identified challenges or barriers to ensuring more students successfully complete their chosen programs of study?
- What approaches should be adopted in the regional strategic plan to ensure more students – across subgroups – gain access to and complete programs of study leading to employment?
- What are the initiative's marketing and communications strategies for underrepresented subgroups?